DOCUMENT RESUME

ED 350 437 CE 062 119

TITLE	Dental Laboratory Technology Program Guide.
INSTITUTION	Georgia Univ., Athens. Dept. of Vocational Education.
SPONS AGENCY	Georgia State Dept. of Technical and Adult Education, Atlanta.
PUB DATE	90
CONTRACT	GA-89-110192
NOTE	233p.; For the program standards, see CE 062 120.
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	*Behavioral Objectives; Competency Based Education; *Course Content; Course Descriptions; *Dental Evaluation; *Dental Technicians; Dentistry; Employment Potential; Entry Workers; Job Skills; *Laboratory Technology; Postsecondary Education; Program Guides; State Curriculum Guides; Technical Education; Technical Institutes; Two Year Colleges
IDENTIFIERS	Georgia

ABSTRACT

This program guide contains the standard dental laboratory technology curriculum for both diploma programs and associate degree programs in technical institutes in Georgia. The curriculum encompasses the minimum competencies required for entry-level workers in the dental laboratory technology field. The general information section contains the following: purpose and objectives; program description, including admissions, typical job titles, and accreditation and certification; and curriculum model, including standard curriculum sequence and lists of courses. The next three sections contain the courses: general core courses for the diploma program (English, mathematics, psychology) and for the associate degree program (economics, composition and rhetoric, algebra, psychology, and speech); fundamental technical courses (head and neck anatomy, dental technology, physics and chemistry of dental materials, tooth morphology, and principles of occlusion); specific technical courses for both diploma and associate degree (removable partial dentures, crown and bridge, complete dentures, dental ceramics, orthodontics/pedodontics, fixed prosthodontics practicum, removable prosthodontics practicum, principles of lab management, advanced removable partial dentures I-II, advanced crown and bridge I-II, advanced complete dentures I-II, and advanced dental ceramics I-II); and specific courses for associate degree only (practicums for removable partial dentures, crown and bridge, complete dentures, and dental ceramics). Each course consists of the following: a course overview (description, competency areas, prerequisites, credit hours, contact hours); course outline with student objectives and class and lab hours; and resource list. The appendix includes an equipment list. (KC)

GEORGIA DEPARTMENT OF TECHNICAL AND
ADULT EDUCATION
FY 89
CONTRACT # 89-110192

GEORGIA DEPARTMENT OF TECHNICAL
AND ADULT EDUCATION

ED350437

DENTAL LABORATORY TECHNOLOGY
PROGRAM GUIDE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

A. Mayfield

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE062119

BEST COPY AVAILABLE

DENTAL LABORATORY TECHNOLOGY PROGRAM GUIDE

Developed and Produced
Under Contractual Agreement with

Office of Technical Education
Department of Technical and Adult Education
Suite 660 South Tower
One CNN Center
Atlanta, Georgia 30303-2705
1990

DENTAL LABORATORY TECHNOLOGY PROGRAM GUIDE

Dr. Debra S. Smith,
Dental Laboratory Technology
Program Guide Development Director

College of Education
Division of Adult, Business, and Vocational Education
University of Georgia
Athens, Georgia

Dr. Richard L. Lynch, Division Chair
Dr. Sheila S. Squires, Project Director
Ted Brown, Project Coordinator
Genet Kibreab, Publications Specialist

ACKNOWLEDGEMENTS

The project staff expresses its sincere appreciation to the Georgia Department of Technical and Adult Education, the dental laboratory technology profession, and the state's technical institutes for their contribution to the development of this program guide. Kenneth Breeden and Robert Mabry of the Department of Technical and Adult Education provided initiative and direction for the project. Patt Stonehouse, Director of Instructional Services for the Department of Technical and Adult Education, provided invaluable assistance in the planning and monitoring of the project.

Without the close cooperation of members of the dental laboratory technology profession in Georgia, this program guide would not have been possible. The Dental Laboratory Technology State Technical Committee provided overall direction, identified areas of concern, provided occupational outlook and equipment recommendations, participated in task analysis review, and reviewed the curriculum in this guide. We would like to recognize each member of the Dental Laboratory Technology State Technical Committee below.

Ron Altman
Altman Dental Lab

George C. Cofer, CDT
Duluth

Joseph Curry
JNC Laboratories

Teresa Duff, CDT
Proctor Dental Lab

Steve Epley
Epley Crown & Bridge Laboratory

Terry Fohey
Nu-Craft Dental Arts, Inc.

Phillip Gold
Oral Arts Dental Lab, Inc.

William Holden, DMD
Augusta

Dennis Hoyt
Restorative Laboratory

Elsworth James
Dental Laboratory

Greg Mintz, DMD
VA Medical Center

Logan Nalley, DMD
Augusta

Daniel Perez, CDT
Certified Dental Ceramics

D. Buck Plymale, Jr.
J. Minor Sturgis Porcelain Laboratory

Betty Pollard
Augusta

Jim Stallings
Macon

Brenda Wallington, RG
Buford

Bill Williams
Medical College of Georgia

The Occupational Working Committee composed of personnel from the technical institutes and other educational institutions provided direct technical support and expertise in the development of the program guides. The members of this committee made the success of this endeavor possible. We would like to recognize the educators who participated on the Dental Laboratory Technology Occupational Working Committee below.

Merritt Efferson
Atlanta Technical Institute

Nick Mellinger
Augusta Technical Institute

James A. Nicholson
Atlanta Technical Institute

Lynn Story
Atlanta Technical Institute

Wally Turner
Gwinnett Technical Institute

Warren Walker
Gwinnett Technical Institute

We would like to thank all the other business, industry, and educational leaders who contributed to the development of the program guide. We would also like to thank Hoyt Sappé for research, Claire Thompson for communications, Lois Brown and Lee Burket for editorial assistance, and Rhonda Farmer and Lisa Parr for electronic publishing assistance.

TABLE OF CONTENTS

TAB/SECTION	SUBJECT	LOCATION
GENERAL INFORMATION		**01**
Diploma Program		
Introduction	Overview	01-01-01
	Standard Curriculum	01-01-02
	Developmental Process	01-01-03
	Purpose and Objectives	01-01-04
Program Description	Program Defined	01-02-01
	Admissions	01-02-02
	Typical Job Titles	01-02-03
	Accreditation/Certification	01-02-04
Curriculum Model	Standard Curriculum	01-03-01
	General Core Courses	01-03-02
	Fundamental Technical Courses	01-03-03
	Specific Technical Courses	01-03-04
	Electives	01-03-05
	Areas of Specialization	01-03-06
Associate Degree Program		
Introduction	Overview	01-04-01
	Standard Curriculum	01-04-02
	Developmental Process	01-04-03
	Purpose and Objectives	01-04-04
Program Description	Program Defined	01-05-01
	Admissions	01-05-02
	Typical Job Titles	01-05-03
	Accreditation/Certification	01-05-04

TAB/SECTION	SUBJECT	LOCATION
Curriculum Model	Standard Curriculum	01-06-01
	General Core Courses	01-06-02
	Fundamental Technical Courses	01-06-03
	Specific Technical Courses	01-06-04
	Electives	01-06-05
	Areas of Specialization	01-06-06
GENERAL CORE COURSES		**02**
Diploma Program		
ENG 101 English	Course Overview	02-01-01
	Course Outline	02-01-02
	Resources	02-01-03
MAT 101 General Mathematics	Course Overview	02-02-01
	Course Outline	02-02-02
	Resources	02-02-03
PSY 101 Basic Psychology	Course Overview	02-03-01
	Course Outline	02-03-02
	Resources	02-03-03
Associate Degree Program		
ECO 191 Principles of Economics	Course Overview	02-04-01
	Course Outline	02-04-02
	Resources	02-04-03
ENG 191 Composition and Rhetoric I	Course Overview	02-05-01
	Course Outline	02-05-02
	Resources	02-05-03
MAT 191 College Algebra	Course Overview	02-06-01
	Course Outline	02-06-02
	Resources	02-06-03

TAB/SECTION	SUBJECT	LOCATION
PSY 191 Introductory Psychology	Course Overview	02-07-01
	Course Outline	02-07-02
	Resources	02-07-03
SPC 191 Fundamentals of Speech	Course Overview	02-08-01
	Course Outline	02-08-02
	Resources	02-08-03
FUNDAMENTAL TECHNICAL COURSES		**03**
Diploma Program and Associate Degree Program		
DEN 102 Head and Neck Anatomy	Course Overview	03-01-01
	Course Outline	03-01-02
	Resources	03-01-03
DLT 101 Introduction to Dental Technology	Course Overview	03-02-01
	Course Outline	03-02-02
	Resources	03-02-03
DLT 102 Physics and Chemistry of Dental Materials	Course Overview	03-03-01
	Course Outline	03-03-02
	Resources	03-03-03
DLT 103 Tooth Morphology	Course Overview	03-04-01
	Course Outline	03-04-02
	Resources	03-04-03
DLT 104 Principles of Occlusion	Course Overview	03-05-01
	Course Outline	03-05-02
	Resources	03-05-03
SPECIFIC TECHNICAL COURSES		**04**
Diploma Program and Associate Degree Program		
DLT 111 Removable Partial Dentures	Course Overview	04-01-01
	Course Outline	04-01-02
	Resources	04-01-03

TAB/SECTION			SUBJECT	LOCATION
DLT	112	Crown and Bridge	Course Overview	04-02-01
			Course Outline	04-02-02
			Resources	04-02-03
DLT	113	Complete Dentures	Course Overview	04-03-01
			Course Outline	04-03-02
			Resources	04-03-03
DLT	114	Dental Ceramics	Course Overview	04-04-01
			Course Outline	04-04-02
			Resources	04-04-03
DLT	115	Orthodontics/ Pedodontics	Course Overview	04-05-01
			Course Outline	04-05-02
			Resources	04-05-03
DLT	116	Fixed Prosthodontics Practicum	Course Overview	04-06-01
			Course Outline	04-06-02
			Resources	04-06-03
DLT	117	Removable Prosthodontics Practicum	Course Overview	04-07-01
			Course Outline	04-07-02
			Resources	04-07-03
DLT	201	Principles of Laboratory Management	Course Overview	04-08-01
			Course Outline	04-08-02
			Resources	04-08-03
DLT	202	Advanced Removable Partial Dentures I	Course Overview	04-09-01
			Course Outline	04-09-02
			Resources	04-09-03
DLT	203	Advanced Crown and Bridge I	Course Overview	04-10-01
			Course Outline	04-10-02
			Resources	04-10-03
DLT	204	Advanced Complete Dentures I	Course Overview	04-11-01
			Course Outline	04-11-02
			Resources	04-11-03

TAB/SECTION		SUBJECT	LOCATION
DLT 205	Advanced Dental Ceramics I	Course Overview	04-12-01
		Course Outline	04-12-02
		Resources	04-12-03
DLT 206	Advanced Removable Partial Dentures II	Course Overview	04-13-01
		Course Outline	04-13-02
		Resources	04-13-03
DLT 207	Advanced Crown and Bridge II	Course Overview	04-14-01
		Course Outline	04-14-02
		Resources	04-14-03
DLT 208	Advanced Complete Dentures II	Course Overview	04-15-01
		Course Outline	04-15-02
		Resources	04-15-03
DLT 209	Advanced Dental Ceramics II	Course Overview	04-16-01
		Course Outline	04-16-02
		Resources	04-16-03
Associate Degree Program Only			
DLT 214	Removable Partial Dentures Practicum	Course Overview	04-17-01
		Course Outline	04-17-02
		Resources	04-17-03
DLT 215	Crown and Bridge Practicum	Course Overview	04-18-01
		Course Outline	04-18-02
		Resources	04-18-03
DLT 216	Complete Dentures Practicum	Course Overview	04-19-01
		Course Outline	04-19-02
		Resources	04-19-03
DLT 217	Dental Ceramics Practicum	Course Overview	04-20-01
		Course Outline	04-20-02
		Resources	04-20-03

TAB/SECTION	SUBJECT	LOCATION
APPENDICES		**99**
Appendix A	Equipment List	99-01-01

HOW TO USE THIS MANUAL

Summary

This manual is divided into:

Tabs - major divisions, physically separated by numbered tab dividers

Sections - divisions within a tab

Subjects - divisions within a section

Numbering System

Each document (Subject) has a unique 6-digit number. This number is divided into 3 sets of 2 digits which are separated by dashes.

Example:	04	-	02	-	03
	TAB		SECTION		SUBJECT

Locating a Document

Document numbers appear on the upper right hand corner of each page (see top of this page). To locate a subject:

1. Refer to the Table of Contents.
2. Note the document number for the subject.

   Example: 04-02-03

3. Turn to the tab divider marked 04 and within this tab find Section 02 and Subject 03.

Table of Contents

The table of contents (00-00-01) is intended to give a cover-to-cover overview of the manual contents and organization. It lists contents of a Tab to the Section and Subject level.

Amendments

Registered manual holders are instructed to keep their manuals up-to-date.

Manuals Document Transmittal	All new or revised documents are sent to the registered holder of the manual and are recorded on a Manuals Document Transmittal Form. Transmittals are numbered consecutively, and instructions for use are printed on the form.
Amendment Record	The registered holder of the manual records the receipt of all manual document transmittals on the Amendment Record. This record and instructions are found on the reverse side of the manual title page.

GENERAL INFORMATION

Diploma Program Introduction

Overview

Dental Laboratory Technology is a program of study which is compatible with the policies of the Georgia Board of Technical and Adult Education and encourages each Dental Laboratory Technology program student to benefit and contribute as a partner in the economic development and stability of Georgia. The philosophy of the Dental Laboratory Technology program is founded on the value attributed to individual students, the dental laboratory technology profession, and technical education.

The Dental Laboratory Technology program of study is consistent with the philosophy and purpose of the institution. The program provides academic foundations in communications, mathematics, and human relations as well as technical fundamentals. Program graduates are trained in the underlying fundamentals of dental laboratory technology and are well prepared for employment and subsequent upward mobility.

The Dental Laboratory Technology program is a technical program that provides the knowledge and skills to qualify participants for the dental laboratory technology profession. This profession is presently experiencing growth and the employment market is experiencing shortages of trained dental laboratory technicians.

The program structure acknowledges individual differences and provides opportunities for students to seek fulfillment of their respective educational goals. The program does not discriminate on the basis of race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.

To assist each student to attain his or her respective potential within the program, both the instructor and the student incur an obligation in the learning process. The instructor is a manager of instructional resources and organizes instruction in a manner which promotes learning. The student assumes responsibility for learning by actively participating in the learning process.

Important attributes for success of program graduates are analytical thinking, problem solving, and the ability to apply technology to the work requirement. Dental laboratory technology is a dynamic profession; therefore, careful attention to current curriculum and up-to-date instructional equipment is required. The program promotes the concept of change as the technology evolves and nurtures the spirit of involvement in lifelong professional learning.

GENERAL INFORMATION

Diploma Program Introduction

Standard Curriculum

The Dental Laboratory Technology program guide presents the standard dental laboratory technology curriculum for technical institutes in Georgia. This curriculum addresses the minimum competencies for the Dental Laboratory Technology program. The competency areas included in a local Dental Laboratory Technology program may exceed what is contained in this program guide, but it must encompass the minimum competencies contained herein.

As changes occur in the Dental Laboratory Technology program, this guide will be revised to reflect those changes. Proposed changes are first evaluated and approved by the local program advisory committee and then forwarded to the State Technical Committee for approval and inclusion in the state standard program guide.

GENERAL INFORMATION

Diploma Program Introduction

Developmental Process

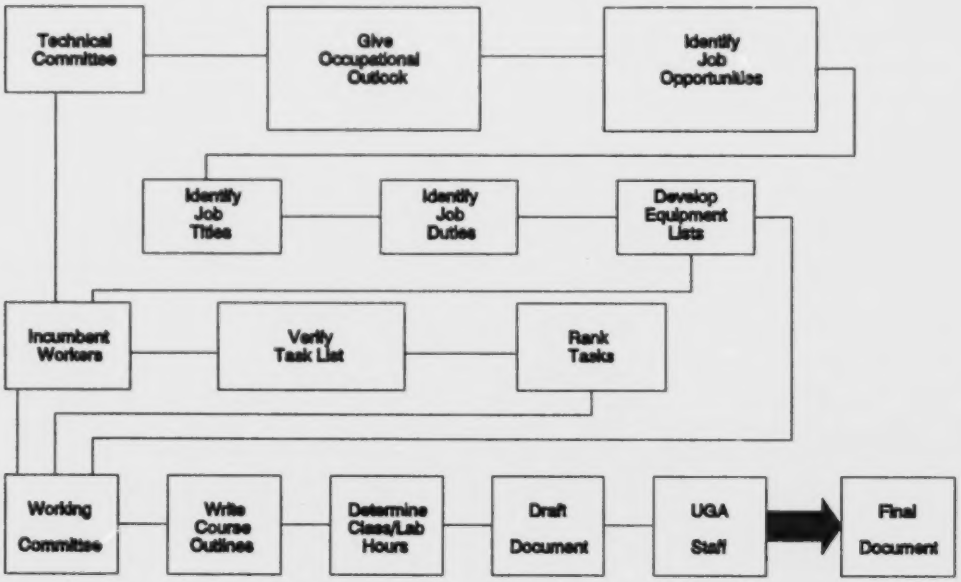
The development of the Dental Laboratory Technology program guide was based on the premise that the people in the industry can best determine program needs. With this in mind, representatives from businesses which would employ program graduates were asked to serve on a State Technical Committee to help identify the technical content and to provide overall guidance to ensure that the resulting program would produce graduates qualified for entry-level positions in the dental laboratory technology profession.

The State Technical committee verified an occupational task list that had been compiled through extensive research. These representatives included workers who had actually performed the duties and tasks being verified.

Technical institutes which would implement the curriculum were also included in the developmental effort. Representatives from the technical institutes provided the expertise in teaching methodology unique to each discipline and developed the courses contained in this program guide.

The University of Georgia coordinated and directed the development of the curriculum and produced the final program guide. The role of each group in the developmental process is shown in the diagram on the following page.

DATA/PROCESS FLOW DIAGRAM



GENERAL INFORMATION

Diploma Program Introduction

Purpose and Objectives

Purpose

The purpose of the Dental Laboratory Technology program is to provide educational opportunities to individuals that will enable them to obtain the knowledge, skills, and attitudes necessary to succeed as dental laboratory technicians.

The Dental Laboratory Technology program provides educational opportunities regardless of race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.

The Dental Laboratory Technology program graduates are prepared to function as professional technicians in two of the following areas: removable partial dentures, complete dentures, crown and bridge, and dental ceramics. Program graduates are to be competent in the general areas of communications, math, interpersonal relations, and economics. Program graduates are to be competent in the technical areas of head and neck anatomy, physics and chemistry of dental materials, tooth morphology, principles of occlusion, removable partial dentures, crown and bridge, complete dentures, dental ceramics, orthodontics/pedodontics, and dental laboratory management.

Objectives

1. Provide current curriculum, instructional materials, and equipment (in accordance with available funding) which teach knowledge, skills, and attitudes appropriate to industry needs.

2. Provide educational facilities which foster learning and provide safe, healthy environments available and accessible to all students who can benefit from the program.

3. Provide academic instruction which supports effective learning within the program and which enhances professional performance on the job.

4. Provide employability skills which foster work attitudes and work habits that will enable graduates of the program to perform as good employees.

5. Nurture the desire for learning so that graduates will pursue their own continuing education as a lifelong endeavor.

6. Provide an educational atmosphere which promotes a positive self-image and a sense of personal well-being.

7. Provide education that fosters development of good safety habits.

8. Provide admission, educational, and placement services without regard to race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.

9. Provide information to the public regarding the program that will facilitate recruitment and enrollment of students.

10. Promote good public relations via contacts and regular communications with business, industry, and the public sector.

11. Promote faculty and student rapport and communications to enhance student success in the program.

GENERAL INFORMATION

Diploma Program Description

Program Defined

The Dental Laboratory Technology accredited program prepares students for employment in a variety of positions in today's dental laboratories. The Dental Laboratory Technology program provides learning opportunities which introduce, develop, and reinforce academic and occupational knowledge, skills, and attitudes required for job acquisition, retention, and advancement. Additionally, the program provides opportunities to upgrade present knowledge and skills or to retrain in the area of dental laboratory technology. Graduates of the program receive a dental laboratory technology diploma with specializations in two of the following areas: removable partial dentures, complete dentures, crown and bridge, or dental ceramics and are eligible to sit for a national certification examination.

GENERAL INFORMATION

Diploma Program Description

Admissions

Admissions Requirements

Admission of new students to the Dental Laboratory Technology program is contingent upon their meeting all of the following requirements:

a) attainment of 16 or more years of age;
b) documentation of high school graduation or satisfaction of High School Equivalency Certificate requirements;
c) achievement of minimum regular admission scores on tests of reading, language, and math as specified in GDTAE document *Minimum Program Entrance Scores;* and
d) completion of application and related procedures.

Admission of transfer students is contingent upon their meeting the following:

a) regular admission and good standing at a regionally accredited diploma or degree granting institution; and
b) proper completion of application and related procedures.

Provisional Admission

A new student who does not meet the regular admission requirements of the program may be admitted on a provisional basis. The requirements for provisional admission are:

a) attainment of 16 or more years of age;
b) achievement of minimum provisional admission scores on tests of reading, language, and math as specified in GDTAE document *Minimum Program Entrance Scores*, or recommendation by program faculty and designated admissions personnel on the basis of interview and assessment of student potential; and
c) completion of application and related procedures.

GENERAL INFORMATION

Diploma Program Description

Typical Job Titles

The Dental Laboratory Technology program is assigned a (PGM) CIP code of (PGM) 17.0103a and is consistent with all other programs throughout the state which have the same (PGM) CIP code. The related D.O.T. job titles follow:

712.281-010	Dental Ceramist
712.381-018	Dental Laboratory Technician
712.381-018	Dental Technician, Crown and Bridge
712.381-030	Orthodontic Technician
712.681-010	Denture Waxer

GENERAL INFORMATION

Diploma Program Description

Accreditation and Certification

This program must conform to the institutional accreditation requirements of the Southern Association of Colleges and Schools by meeting Commission on Colleges (COC) or Commission on Occupational Education Institutions (COEI) accreditation requirements and must not conflict with the accreditation criteria established by COC and COEI.

This program must meet the requirements stated in the *Accreditation Standards Dental Laboratory Technology Education Programs.*

Dental laboratory technicians are certified by the Dental Laboratory Technology National Board. Students are eligible to sit for the national certification examination upon completion of the program.

GENERAL INFORMATION

Diploma Program Curriculum Model

Standard Curriculum

The curriculum design components, general core courses, fundamental occupational/technical courses, specific occupational/technical courses, and elective courses, are listed below with quarter hour credits and suggested course prerequisites and/or corequisites.

Essential Courses			Credits	Sequence
Essential General Core Courses			15	
ENG	101	English	5	[P] ENG 097, or DTAE English admission score levels; and RDG 097, or DTAE reading admission score levels
MAT	101	General Mathematics	5	[P] MAT 097, or DTAE arithmetic admission score levels
PSY	101	Basic Psychology	5	[P] Provisional admission
Essential Fundamental Technical Courses			17	
DEN	102	Head and Neck Anatomy	2	[P] Provisional admission
DLT	101	Introduction to Dental Technology	4	[P] Provisional admission
DLT	102	Physics and Chemistry of Dental Materials	5	[P] Program admission
DLT	103	Tooth Morphology	3	[P] Program admission
DLT	104	Principles of Occlusion	3	[P] DLT 101, DLT 103
Essential Specific Technical Courses			62	
DLT	111	Removable Partial Dentures	6	[P] DLT 101, DLT 102, DLT 103
DLT	112	Crown and Bridge	6	[P] DLT 101, DLT 102, DLT 103 [P/C] DLT 104
DLT	113	Complete Dentures	6	[P/C] DLT 101, DLT 102, DLT 103
DLT	114	Dental Ceramics	6	[P] DLT 101, DLT 102, DLT 103

Essential Courses		Credits	Sequence
DLT 115	Orthodontics/Pedodontics	3	[P] DLT 101, DLT 103
DLT 116	Fixed Prosthodontics Practicum		[P] DLT 112, DLT 114 [P/C] DLT 115
OR			
DLT 117	Removable Prosthodontics Practicum	10	[P] DLT 111, DLT 113 [P/C] DLT 115
DLT 201	Principles of Laboratory Management	5	[P] Program admission
AND			
(Completion of two specializations is required.)			
Essential Removable Partial Dentures Specialization Courses		10	
DLT 202	Advanced Removable Partial Dentures I	5	[P] DLT 111, DLT 115
DLT 206	Advanced Removable Partial Dentures II	5	[P] DLT 202
Essential Crown and Bridge Specialization Courses		10	
DLT 203	Advanced Crown and Bridge I	5	[P] DLT 112
DLT 207	Advanced Crown and Bridge II	5	[P] DLT 203
Essential Complete Dentures Specialization Courses		10	
DLT 204	Advanced Complete Dentures I	5	[P] DLT 113
DLT 208	Advanced Complete Dentures II	5	[P] DLT 204
Essential Dental Ceramics Specialization Courses		10	
DLT 205	Advanced Dental Ceramics I	5	[P] DLT 114
DLT 209	Advanced Dental Ceramics II	5	[P] DLT 205

Essential Courses	Credits	Sequence
Essential Electives	15	

Program Final Exit Point

Dental laboratory technician with specializations in two of the following areas: removable partial dentures, complete dentures, crown and bridge, or dental ceramics

Credits Required for Graduation

109 minimum quarter hour credits required for graduation

GENERAL INFORMATION

Diploma Program Curriculum Model

Standard Curriculum

The standard curriculum for the Dental Laboratory Technology program is set up on the quarter system. A suggested sequence for the program is given below. Selection of two (2) specialization areas are required for program completion. Technical institutes may implement the Dental Laboratory Technology program by using the sequence listed below or by using a locally developed sequence designed to reflect course prerequisites and/or corequisites.

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
SUGGESTED SEQUENCE				
FIRST QUARTER				
DEN 102 Head and Neck Anatomy	2	0	2	2
DLT 101 Introduction to Dental Technology	3	2	5	4
DLT 102 Physics and Chemistry of Dental Materials	5	0	5	5
DLT 103 Tooth Morphology	2	3	5	3
ENG 101 English	5	0	5	5
	17	5	22	19
SECOND QUARTER				
DLT 104 Principles of Occlusion	2	3	5	3
DLT 111 Removable Partial Dentures	2	8	10	6
DLT 112 Crown and Bridge	2	8	10	6
MAT 101 General Mathematics	5	0	5	5
	11	19	30	20

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
THIRD QUARTER				
DLT 113 Complete Dentures	2	8	10	6
DLT 114 Dental Ceramics	2	8	10	6
PSY 101 Basic Psychology	5	0	5	5
XXX xxx Elective	-	-	-	5
	9	16	25	22
FOURTH QUARTER				
DLT 115 Orthodontics/Pedodontics	1	4	5	3
DLT 116 Fixed Prosthodontics Practicum				
OR				
DLT 117 Removable Prosthodontics Practicum	0	32	32	10
	1	36	37	13

In subsequent quarters, 10 credits of electives must be taken for completion of program requirements. Please note each scheduled specialization lists DLT 201 (not to be repeated in completion of second option).

GENERAL INFORMATION

Diploma Program Curriculum Model

Removable Partial Dentures Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 202 Advanced Removable Partial Dentures I	1	9	10	5
	6	9	15	10
SIXTH QUARTER				
DLT 206 Advanced Removable Partial Dentures II	1	9	10	5
	1	9	10	5

GENERAL INFORMATION

Diploma Program Curriculum Model

Crown and Bridge Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 203 Advanced Crown and Bridge I	1	9	10	5
	6	9	15	10
SIXTH QUARTER				
DLT 207 Advanced Crown and Bridge II	1	9	10	5
	1	9	10	5

GENERAL INFORMATION

Diploma Program Curriculum Model

Complete Dentures Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 204 Advanced Complete Dentures I	1	9	10	5
	6	9	15	10
SIXTH QUARTER				
DLT 208 Advanced Complete Dentures II	1	9	10	5
	1	9	10	5

GENERAL INFORMATION

Diploma Program Curriculum Model

Dental Ceramics Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 205 Advanced Dental Ceramics I	1	9	10	5
	6	9	15	10
SIXTH QUARTER				
DLT 209 Advanced Dental Ceramics II	1	9	10	5
	1	9	10	5

GENERAL INFORMATION

Diploma Program Curriculum Model

General Core Courses

The general core courses provide students with a foundation in the basic skills which enable them to express themselves more clearly, both orally and in writing, and to perform the mathematical functions required in this occupation. The general core courses for the Dental Laboratory Technology program are listed below.

ENG	101	English	5 Credits
MAT	101	General Mathematics	5 Credits
PSY	101	Basic Psychology	5 Credits

GENERAL INFORMATION

Diploma Program Curriculum Model

Fundamental Technical Courses

The fundamental technical courses provide students with a foundation in the area of dental laboratory technology which is needed to progress to the more highly specialized courses in dental laboratory technology. The fundamental technical courses are listed below.

DEN	102	Head and Neck Anatomy	2 Credits
DLT	101	Introduction to Dental Technology	4 Credits
DLT	102	Physics and Chemistry of Dental Materials	5 Credits
DLT	103	Tooth Morphology	3 Credits
DLT	104	Principles of Occlusion	3 Credits

GENERAL INFORMATION

Diploma Program Curriculum Model

Specific Technical Courses

The specific technical courses build upon the fundamental technical courses to provide the student with the basic knowledge and skill required to work as a dental laboratory technician. The specific technical courses offered in the dental laboratory technology program are listed below.

DLT	111	Removable Partial Dentures	6 Credits
DLT	112	Crown and Bridge	6 Credits
DLT	113	Complete Dentures	6 Credits
DLT	114	Dental Ceramics	6 Credits
DLT	115	Orthodontics/Pedodontics	3 Credits
DLT	116	Fixed Prosthodontics Practicum	10 Credits
DLT	117	Removable Prosthodontics Practicum	10 Credits
DLT	201	Principles of Laboratory Management	5 Credits
DLT	202	Advanced Removable Partial Dentures I	5 Credits
DLT	203	Advanced Crown and Bridge I	5 Credits
DLT	204	Advanced Complete Dentures I	5 Credits
DLT	205	Advanced Dental Ceramics I	5 Credits
DLT	206	Advanced Removable Partial Dentures II	5 Credits
DLT	207	Advanced Crown and Bridge II	5 Credits
DLT	208	Advanced Complete Dentures II	5 Credits
DLT	209	Advanced Dental Ceramics II	5 Credits

GENERAL INFORMATION

Diploma Program Curriculum Model

Electives

Elective courses are provided to allow for the different levels of prior knowledge and skills brought to the classroom by students with diverse backgrounds, educational attainment, and specialized interests.

Decisions regarding the selection and appropriateness of any elective are made by the student after consultation with the instructor. Provision must be made for electives chosen from disciplines outside the student's area of specialization.

XXX xxx Electives 15 Credits

GENERAL INFORMATION

Diploma Program Curriculum Model

Areas of Specialization

The industry technical committee identified four areas of specialization for which training is needed. In this section the courses required to gain skills are identified for each area of specialization.

In order to provide opportunities for a more specific career path within the broad field of dental laboratory technology, the student must select two 10 credit specializations from the four options available in this program. The courses included in the four Dental Laboratory Technology program specializations are listed below.

			Credits
Essential Removable Partial Dentures Specialization Courses			10
DLT	202	Advanced Removable Partial Dentures I	5
DLT	206	Advanced Removable Partial Dentures II	5
		OR	
Essential Crown and Bridge Specialization Courses			10
DLT	203	Advanced Crown and Bridge I	5
DLT	207	Advanced Crown and Bridge II	5
		OR	
Essential Complete Dentures Specialization Courses			10
DLT	204	Advanced Complete Dentures I	5
DLT	208	Advanced Complete Dentures II	5

OR

Essential Dental Ceramics Specialization Courses	10
DLT 205 Advanced Dental Ceramics I	5
DLT 209 Advanced Dental Ceramics II	5

Document Number:
01-04-01

GENERAL INFORMATION

Associate Degree Program Introduction

Overview

The Dental Laboratory Technology associate degree program is a program of study which is compatible with the policies of the Georgia Board of Technical and Adult Education and encourages each Dental Laboratory Technology associate degree program student to benefit and contribute as a partner in the economic development and stability of Georgia. The philosophy of the Dental Laboratory Technology associate degree program is founded on the value attributed to individual students, the dental laboratory technology profession, and technical education.

The Dental Laboratory Technology associate degree program is consistent with the philosophy and purpose of the institution. The program provides academic foundations in communications, mathematics, economics, and behavioral science as well as technical fundamentals appropriate for a two-year program at the associate degree level. Program graduates are trained in the underlying fundamentals of dental laboratory technology and are well prepared for employment and subsequent upward mobility.

The dental laboratory technician performs those functions which support the dental laboratory owner/operator in two of the following specializations: removable partial dentures, crown and bridge, complete dentures, and dental ceramics. Technicians may work alone or as members of a team. Important attributes for success of program graduates are critical thinking, problem solving, and the ability to apply technology to the work requirement.

The program structure acknowledges individual differences and provides opportunities for persons to seek fulfillment of their educational goals. The program does not discriminate on the basis of race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.

To assist each student to attain his or her potential within the program, both the instructor and the student incur an obligation in the learning process. The instructor is a manager of instructional resources and organizes instruction in a manner which promotes learning. The student assumes responsibility for learning by actively participating in the learning process.

Important attributes for success of program graduates are analytical thinking, problem solving, and the ability to apply technology to the work requirement. Dental laboratory technology is a dynamic profession; therefore, careful attention to current curriculum and up-to-date instructional equipment is required. The program promotes the concept of change as the technology evolves and nurtures the spirit of involvement in lifelong professional learning.

GENERAL INFORMATION

Associate Degree Program Introduction

Standard Curriculum

The Dental Laboratory Technology associate degree program guide presents the standard dental laboratory technology curriculum for technical institutes in Georgia. This curriculum addresses the minimum competencies for the Dental Laboratory Technology associate degree program. The competency areas included in a local Dental Laboratory Technology associate degree program may exceed what is contained in this program guide, but it must encompass the minimum competencies contained herein.

As changes occur in the Dental Laboratory Technology associate degree program, this guide will be revised to reflect those changes. Proposed changes are first evaluated and approved by the local program advisory committee and then forwarded to the State Technical Committee for approval and inclusion in the state standard program guide.

GENERAL INFORMATION

Associate Degree Program Introduction

Developmental Process

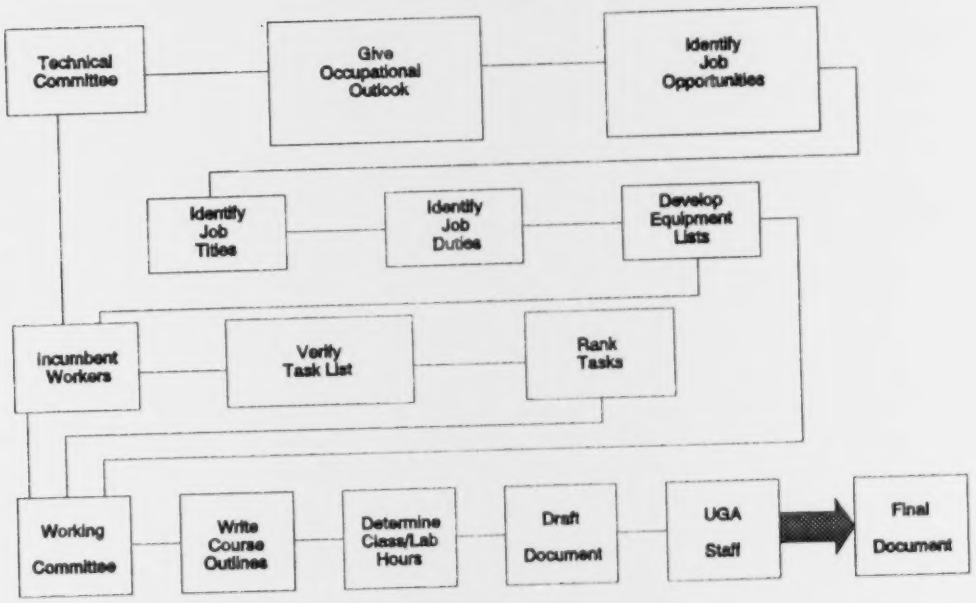
The development of the Dental Laboratory Technology associate degree program guide was based on the premise that the people in the industry can best determine program needs. With this in mind, representatives from businesses which would employ program graduates were asked to serve on a State Technical Committee to help identify the technical content and to provide overall guidance to ensure that the resulting program would produce graduates qualified for entry-level positions in the dental laboratory technology profession.

The State Technical committee verified an occupational task list that had been compiled through extensive research. These representatives included workers who had actually performed the duties and tasks being verified.

Technical institutes which would implement the curriculum were also included in the developmental effort. Representatives from the technical institutes provided the expertise in teaching methodology unique to each discipline and developed the courses contained in this program guide.

The University of Georgia coordinated and directed the development of the curriculum and produced the final program guide. The role of each group in the developmental process is shown in the diagram on the following page.

DATA/PROCESS FLOW DIAGRAM



GENERAL INFORMATION

Associate Degree Program Introduction

Purpose and Objectives

Purpose

The purpose of the Dental Laboratory Technology associate degree program is to provide educational opportunities to individuals that will enable them to obtain the knowledge, skills, and attitudes necessary to succeed as dental laboratory technicians.

The Dental Laboratory Technology associate degree program provides educational opportunities regardless of race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.

The Dental Laboratory Technology associate degree program graduates are prepared to function as professional technicians in two of the following areas: removable partial dentures, complete dentures, crown and bridge, and dental ceramics. Program graduates are to be competent in the general areas of college level English, algebra, economics, and behavioral science. Program graduates are to be competent in the technical areas of head and neck anatomy, physics and chemistry of dental materials, tooth morphology, principles of occlusion, removable partial dentures, crown and bridge, complete dentures, dental ceramics, orthodontics/pedodontics, and dental laboratory management.

Objectives

1. Provide current curriculum, instructional materials, and equipment (in accordance with available funding) which teach knowledge, skills, and attitudes appropriate to industry needs.

2. Provide educational facilities which foster learning and provide safe, healthy environments available and accessible to all students who can benefit from the program.

3. Provide academic instruction which supports effective learning within the program and which enhances professional performance on the job.

4. Provide employability skills which foster work attitudes and work habits that will enable graduates of the program to perform as good employees.

BEST COPY AVAILABLE

5. Nurture the desire for learning so that graduates will pursue their own continuing education as a lifelong endeavor.

6. Provide an educational atmosphere which promotes a positive self-image and a sense of personal well-being.

7. Provide education that fosters development of good safety habits.

8. Provide admission, educational, and placement services without regard to race, color, national origin, religion, sex, age, handicapping condition, academic disadvantage, or economic disadvantage.

9. Provide information to the public regarding the program that will facilitate recruitment and enrollment of students.

10. Promote good public relations via contacts and regular communications with business, industry, and the public sector.

11. Promote faculty and student rapport and communications to enhance student success in the program.

GENERAL INFORMATION

Associate Degree Program Description

Program Defined

The Dental Laboratory Technology accredited associate degree program is a planned sequence of carefully developed college-level courses designed to prepare students to work as technicians in two of the specialties in the field. Graduates will receive a Dental Laboratory Technology associate degree. The program of study emphasizes the application of science and technology combined to prepare graduates to function as dental laboratory technicians with specializations in two of the following areas: removable partial dentures, complete dentures, crown and bridge, or dental ceramics and are eligible to sit for a national certification examination.

GENERAL INFORMATION

Associate Degree Program Description

Admissions

Admissions Requirements

Admission of new students to the Dental Laboratory Technology associate degree program is contingent upon their meeting all of the following requirements:

a) attainment of 16 or more years of age;
b) documentation of high school graduation or satisfaction of High School Equivalency Certificate requirements;
c) achievement of minimum regular admission scores on tests of reading, language, and math as specified in GDTAE document *Minimum Program Entrance Scores*; and
d) completion of application and related procedures.

Admission of transfer students is contingent upon their meeting the following:

a) regular admission and good standing at a regionally accredited diploma or degree granting institution; and
b) proper completion of application and related procedures.

Provisional Admission

A new student who does not meet the regular admission requirements of the program may be admitted on a provisional basis. The requirements for provisional admission are:

a) attainment of 16 or more years of age;
b) documentation of high school graduation or satisfaction of High School Equivalency Certificate requirements;
c) achievement of minimum provisional admission scores on tests of reading, language, and math as specified in GDTAE document *Minimum Program Entrance Scores*, or recommendation by program faculty and designated admissions personnel on the basis of interview and assessment of student potential; and
c) completion of application and related procedures.

GENERAL INFORMATION

Associate Degree Program Description

Typical Job Titles

The Dental Laboratory Technology associate degree program is assigned a (PGM) CIP code of (PGM) 17.0103a and is consistent with all other programs throughout the state which have the same (PGM) CIP code. The related D.O.T. job titles follow:

712.281-010	Dental Ceramist
712.381-018	Dental Laboratory Technician
712.381-018	Dental Technician, Crown and Bridge
712.381-030	Orthodontic Technician
712.681-010	Denture Waxer

GENERAL INFORMATION

Associate Degree Program Description

Accreditation and Certification

This program must conform to the institutional accreditation requirements of the Southern Association of Colleges and Schools by meeting Commission on Colleges (COC) or Commission on Occupational Education Institutions (COEI) accreditation requirements and must not conflict with the accreditation criteria established by COC and COEI.

This program must meet the requirements stated in the *Accreditation Standards Dental Laboratory Technology Education Programs.*

Dental laboratory technicians are certified by the Dental Laboratory Technology National Board. Students are eligible to sit for the national certification examination upon completion of the program.

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Standard Curriculum

The curriculum design components, general core courses, fundamental occupational/technical courses, specific occupational/technical courses, and elective courses, are listed below with quarter hour credits and suggested course prerequisites and/or corequisites.

Essential Courses			Credits	Sequence
Essential General Core Courses			25	
Area I				
ENG	191	Composition and Rhetoric I	5	[P] Program admission level language competency or ENG 098
SPC	191	Fundamentals of Speech	5	[P] Program admission level language competency or ENG 098
Area II				
ECO	191	Principles of Economics	5	[P] Program admission
PSY	191	Introductory Psychology	5	[P] Program admission
Area III				
MAT	191	College Algebra	5	[P] Program admission level math achievement
Essential Fundamental Technical Courses			17	
DEN	102	Head and Neck Anatomy	2	[P] Provisional admission
DLT	101	Introduction to Dental Technology	4	[P] Provisional admission
DLT	102	Physics and Chemistry of Dental Materials	5	[P] Program admission
DLT	103	Tooth Morphology	3	[P] Program admission
DLT	104	Principles of Occlusion	3	[P] DLT 101, DLT 103

Essential Courses		Credits	Sequence
Essential Specific Technical Courses		74	
DLT 111	Removable Partial Dentures	6	[P] DLT 101, DLT 102, DLT 103
DLT 112	Crown and Bridge	6	[P] DLT 101, DLT 102, DLT 103 [P/C] DLT 104
DLT 113	Complete Dentures	6	[P/C] DLT 101, DLT 102, DLT 103
DLT 114	Dental Ceramics	6	[P] DLT 101, DLT 102, DLT 103
DLT 115	Orthodontics/Pedodontics	3	[P] DLT 101, DLT 103
DLT 116	Fixed Prosthodontics Practicum		[P] DLT 112, DLT 114 [P/C] DLT 115
OR			
DLT 117	Removable Prosthodontics Practicum	10	[P] DLT 111, DLT 113 [P/C] DLT 115
DLT 201	Principles of Laboratory Management	5	[P] Program admission
AND			
(Completion of two specializations is required.)			
Essential Removable Partial Dentures Specialization Courses		16	
DLT 202	Advanced Removable Partial Dentures I	5	[P] DLT 111, DLT 115
DLT 206	Advanced Removable Partial Dentures II	5	[P] DLT 202
DLT 214	Removable Partial Dentures Practicum	6	[P] DLT 202, DLT 206
Essential Crown and Bridge Specialization Courses		16	
DLT 203	Advanced Crown and Bridge I	5	[P] DLT 112
DLT 207	Advanced Crown and Bridge II	5	[P] DLT 203
DLT 215	Crown and Bridge Practicum	6	[P] DLT 203, DLT 207
Essential Complete Dentures Specialization Courses		16	
DLT 204	Advanced Complete Dentures I	5	[P] DLT 113

Essential Courses		Credits	Sequence
DLT 208	Advanced Complete Dentures II	5	[P] DLT 204
DLT 216	Complete Dentures Practicum	6	[P] DLT 204, DLT 208
Essential Dental Ceramics Specialization Courses		16	
DLT 205	Advanced Dental Ceramics I	5	[P] DLT 114
DLT 209	Advanced Dental Ceramics II	5	[P] DLT 205
DLT 217	Dental Ceramics Practicum	6	[P] DLT 205, DLT 209
Essential Electives		6	
XXX xxx	Minimum of two elective courses	6	

Program Final Exit Point

Dental laboratory technician with specializations in two of the following areas: removable partial dentures, complete dentures, crown and bridge, or dental ceramics

Credits Required for Graduation

122 minimum quarter hour credits required for graduation

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Standard Curriculum

The standard curriculum for the Dental Laboratory Technology associate degree program is set up on the quarter system. A suggested sequence for the program is given below. Selection of two (2) specialization areas are required for program completion. Technical institutes may implement the Dental Laboratory Technology associate degree program by using the sequence listed below or by using a locally developed sequence designed to reflect course prerequisites and/or corequisites.

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
SUGGESTED SEQUENCE				
FIRST QUARTER				
DEN 102 Head and Neck Anatomy	2	0	2	2
DLT 101 Introduction to Dental Technology	3	2	5	4
DLT 102 Physics and Chemistry of Dental Materials	5	0	5	5
DLT 103 Tooth Morphology	2	3	5	3
ENG 191 Composition and Rhetoric I	5	0	5	5
	17	5	22	19
SECOND QUARTER				
DLT 104 Principles of Occlusion	2	3	5	3
DLT 111 Removable Partial Dentures	2	8	10	6
DLT 112 Crown and Bridge	2	8	10	6
MAT 191 College Algebra	5	0	5	5
	11	19	30	20

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
THIRD QUARTER				
DLT 113 Complete Dentures	2	8	10	6
DLT 114 Dental Ceramics	2	8	10	6
PSY 191 Introductory Psychology	5	0	5	5
XXX xxx Elective	-	-	-	3
XXX xxx Elective	-	-	-	3
	9	16	25	23
FOURTH QUARTER				
DLT 115 Orthodontics/Pedodontics	1	4	5	3
DLT 116 Fixed Prosthodontics Practicum				
OR				
DLT 117 Removable Prosthodontics Practicum	0	32	32	10
	1	36	37	13

Please note each scheduled specialization lists DLT 201, ECO 191, and SPC 191 (not to be repeated in completion of second option).

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Removable Partial Dentures Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 202 Advanced Removable Partial Dentures I	1	9	10	5
ECO 191 Principles of Economics	5	0	5	5
	11	9	20	15
SIXTH QUARTER				
DLT 206 Advanced Removable Partial Dentures II	1	9	10	5
SPC 191 Fundamentals of Speech	5	0	5	5
	6	9	15	10
SEVENTH QUARTER				
DLT 214 Removable Partial Dentures Practicum	0	18	18	6
	0	18	18	6

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Crown and Bridge Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 203 Advanced Crown and Bridge I	1	9	10	5
ECO 191 Principles of Economics	5	0	5	5
	11	9	20	15
SIXTH QUARTER				
DLT 207 Advanced Crown and Bridge II	1	9	10	5
SPC 191 Fundamentals of Speech	5	0	5	5
	6	9	15	10
SEVENTH QUARTER				
DLT 215 Crown and Bridge Practicum	0	18	18	6
	0	18	18	6

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Complete Dentures Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 204 Advanced Complete Dentures I	1	9	10	5
ECO 191 Principles of Economics	5	0	5	5
	11	9	20	15
SIXTH QUARTER				
DLT 208 Advanced Complete Dentures II	1	9	10	5
SPC 191 Fundamentals of Speech	5	0	5	5
	6	9	15	10
SEVENTH QUARTER				
DLT 216 Complete Dentures Practicum	0	18	18	6
	0	18	18	6

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Dental Ceramics Specialization

Course	Class Hours	Lab Hours	Weekly Contact Hours	Credits
FIFTH QUARTER				
DLT 201 Principles of Laboratory Management	5	0	5	5
DLT 205 Advanced Dental Ceramics I	1	9	10	5
ECO 191 Principles of Economics	5	0	5	5
	11	9	20	15
SIXTH QUARTER				
DLT 209 Advanced Dental Ceramics II	1	9	10	5
SPC 191 Fundamentals of Speech	5	0	5	5
	6	9	15	10
SEVENTH QUARTER				
DLT 217 Dental Ceramics Practicum	0	18	18	6
	0	18	18	6

GENERAL INFORMATION

Associate Degree Program Curriculum Model

General Core Courses

The general core courses provide students with a foundation in the basic skills which enable them to express themselves more clearly, both orally and in writing, and to perform the mathematical functions required in this occupation. The general core courses for the Dental Laboratory Technology associate degree program are listed below.

ECO	191	Principles of Economics	5 Credits
ENG	191	Composition and Rhetoric I	5 Credits
MAT	191	College Algebra	5 Credits
PSY	191	Introductory Psychology	5 Credits
SPC	191	Fundamentals of Speech	5 Credits

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Fundamental Technical Courses

The fundamental technical courses provide students with a foundation in the area of dental laboratory technology which is needed to progress to the more highly specialized courses in dental laboratory technology. The fundamental technical courses are listed below.

DEN	102	Head and Neck Anatomy	2 Credits
DLT	101	Introduction to Dental Technology	4 Credits
DLT	102	Physics and Chemistry of Dental Materials	5 Credits
DLT	103	Tooth Morphology	3 Credits
DLT	104	Principles of Occlusion	3 Credits

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Specific Technical Courses

The specific technical courses build upon the fundamental technical courses to provide the student with the basic knowledge and skill required to work as a dental laboratory technician. The specific technical courses offered in the dental laboratory technology program are listed below.

DLT	111	Removable Partial Dentures	6 Credits
DLT	112	Crown and Bridge	6 Credits
DLT	113	Complete Dentures	6 Credits
DLT	114	Dental Ceramics	6 Credits
DLT	115	Orthodontics/Pedodontics	3 Credits
DLT	116	Fixed Prosthodontics Practicum	10 Credits
DLT	117	Removable Prosthodontics Practicum	10 Credits
DLT	201	Principles of Laboratory Management	5 Credits
DLT	202	Advanced Removable Partial Dentures I	5 Credits
DLT	203	Advanced Crown and Bridge I	5 Credits
DLT	204	Advanced Complete Dentures I	5 Credits
DLT	205	Advanced Dental Ceramics I	5 Credits
DLT	206	Advanced Removable Partial Dentures II	5 Credits
DLT	207	Advanced Crown and Bridge II	5 Credits
DLT	208	Advanced Complete Dentures II	5 Credits

DLT	209	Advanced Dental Ceramics II	5 Credits
DLT	214	Removable Partial Dentures Practicum	6 Credits
DLT	215	Crown and Bridge Practicum	6 Credits
DLT	216	Complete Dentures Practicum	6 Credits
DLT	217	Dental Ceramics Practicum	6 Credits

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Electives

Elective courses are provided to allow for the different levels of prior knowledge and skills brought to the classroom by students with diverse backgrounds, educational attainment, and specialized interests.

Decisions regarding the selection and appropriateness of any elective are made by the student after consultation with the instructor. Provision must be made for electives chosen form disciplines outside the student's area of specialization.

XXX xxx	Elective	3 Credits
XXX xxx	Elective	3 Credits

GENERAL INFORMATION

Associate Degree Program Curriculum Model

Areas of Specialization

The industry technical committee identified four areas of specialization for which training is needed. In this section the courses required to gain skills are identified for each area of specialization.

In order to provide opportunities for a more specific career path within the broad field of dental laboratory technology, the student must select two 16 credit specializations from the four options available in this program. The courses included in the four Dental Laboratory Technology associate degree program specializations are listed below.

		Credits
Essential Removable Partial Dentures Specialization Courses		16
DLT 202	Advanced Removable Partial Dentures I	5
DLT 206	Advanced Removable Partial Dentures II	5
DLT 214	Removable Partial Dentures Practicum	6
	OR	
Essential Crown and Bridge Specialization Courses		16
DLT 203	Advanced Crown and Bridge I	5
DLT 207	Advanced Crown and Bridge II	5
DLT 215	Crown and Bridge Practicum	6
	OR	
Essential Complete Dentures Specialization Courses		16
DLT 204	Advanced Complete Dentures I	5
DLT 208	Advanced Complete Dentures II	5
DLT 216	Complete Dentures Practicum	6

OR

Essential Dental Ceramics Specialization Courses	16
DLT 205 Advanced Dental Ceramics I	5
DLT 209 Advanced Dental Ceramics II	5
DLT 217 Dental Ceramics Practicum	6

Document Number:
02-01-01

GENERAL CORE

ENG 101 - English

Course Overview

Course Description

Emphasizes the development and improvement of written and oral communication abilities. Topics include: analysis of writing techniques used in selected readings, writing practice, editing and proofreading, research skills, and oral presentation skills. Homework assignments reinforce classroom learning.

Competency Areas

Analysis of Writing Techniques
Used in Selected Readings
Writing Practice
Editing and Proofreading
Research Skills
Oral Presentation Skills

Prerequisites

ENG 097, or entrance English score in accordance with approved DTAE admission score levels; and RDG 097, or entrance reading score in accordance with approved DTAE admission score levels

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

ENG 101 - English

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
ANALYSIS OF WRITING TECHNIQUES USED IN SELECTED READINGS		**10**	**0**
Review and analysis of various writing techniques	Read and analyze writing to identify subject and focus. Read and analyze writing to identify supporting information. Read and analyze writing to identify patterns of development, such as time, space, climax, examples, process, instructions, definition, comparison/contrast, cause and effect, classification, and problem-solving.		
WRITING PRACTICE		**20**	**0**
Review of grammar fundamentals	Produce logically organized, grammatically acceptable writing.		
Review of composition fundamentals	Compose a variety of paragraphs, reports, memoranda, and business letters. Demonstrate listening skills by following directions for writing assignments.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
EDITING AND PROOFREADING		**10**	**0**
Review of editing fundamentals	Revise to improve ideas, style, organization, and format, preferably with word processing. Edit to improve grammar, mechanics, and spelling.		
RESEARCH SKILLS		**5**	**0**
Resource materials location and utilization	Utilize library resources to enhance writing.		
ORAL PRESENTATION SKILLS		**5**	**0**
Types of oral presentation participation	Participate in class discussion, small group discussion, and/or individual presentations.		
Role of the listener	Participate as an active listener.		

GENERAL CORE

ENG 101 - English

Resources

Books

Graham, S. Y., & Barth, M. E. (1986). *The Harbrace college workbook, Form 10C: Writing for the world of work.* San Diego: Harcourt Brace Jovanovich.

Kraska, M. (1985). *Communication skills for trade and industry.* Cincinnati: South-Western.

Langan, J. (1989). *English skills* (4th ed.). New York: McGraw-Hill.

Lewis, S. D., Smith, H., Baker, F., Ellegood, G., Kopay, C., & Tanzer, W. (1988). *Writing skills for technical students* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Van Alstyne, J. S. (1985). *Professional and technical writing strategies.* Englewood Cliffs, NJ: Prentice Hall.

GENERAL CORE

MAT 101 - General Mathematics

Course Overview

Course Description

Emphasizes mathematical skills that can be applied to the solution of occupational and technical problems. Topics include: properties of numbers, fractions, decimals, percents, ratio and proportion, measurement and conversion, exponents and radicals, and geometric and technical formulas. Class includes lectures, applications, and homework to reinforce learning.

Competency Areas

Properties of Numbers
Fractions
Decimals
Percents
Ratio and Proportion
Measurement and Conversion
Exponents and Radicals
Geometric and Technical Formulas

Prerequisite

MAT 097, or entrance arithmetic score in accordance with approved DTAE admission score levels

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

MAT 101 - General Mathematics

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
PROPERTIES OF NUMBERS		**5**	**0**
Whole numbers	Identify prime and composite numbers.		
	Solve whole number problems using mathematical operations of addition, subtraction, multiplication, division, and powers.		
FRACTIONS		**10**	**0**
Definition of fractions	Define a fraction.		
	Identify proper, improper, and mixed fractions.		
Equivalent fractions	Solve problems relating to equivalent fractions.		
Mathematical operations using fractions	Solve problems requiring multiplication, division, addition, and subtraction of fractions.		
DECIMALS		**5**	**0**
Definition of decimals and place value	Perform mathematical operations using decimals.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Basic operations of mathematics with decimals	Solve problems using decimals, scientific notation, and powers of ten.		
Conversion of fractions to decimals and decimals to fractions			
Powers of ten			
PERCENTS		5	0
Definition of percents	Work problems using percents dealing with mixtures and interests.		
Conversion between fractions and decimals			
Base-rate-part problems			
Mixture and interest			
RATIO AND PROPORTION		5	0
Definition of rate, ratio, and proportions	Construct and solve problems involving ratios and proportions.		
Variation: direct and inverse	Identify, setup, and solve proportionality problems.		
MEASUREMENT AND CONVERSION		5	0
Measurement and conversion	Solve problems and applications in measurement and conversion.		
Definition of basic units of measurement	Use dimensioning.		
	Convert between measurement systems.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
EXPONENTS AND RADICALS		**5**	**0**
Laws of exponents	Apply laws of exponents to simplify complex exponents expressions.		
Radicals	Find roots of numbers.		
GEOMETRIC AND TECHNICAL FORMULAS		**10**	**0**
Types of formulas	Identify basic two- and three-dimensional figures.		
	Find the areas of rectangular and circular figures.		
	Solve for volumes of cubes, rectangular solids, and right circular cylinders.		
	Identify, measure, and solve problems using angles.		
	Solve and manipulate basic algebraic and trigonometric formulas.		

GENERAL CORE

MAT 101 - General Mathematics

Resources

Books

Aufmann, R. N., & Barker, V. C. (1987). *Basic college mathematics* (3rd ed.). Boston: Houghton Mifflin.

Barker, J., Rogers, J., & Van Dyke, J. (1987). *Arithmetic* (4th ed.). Philadelphia: Saunders College.

Carman, R. A., & Saunders, H. M. (1986). *Mathematics for the trade, a guided approach.* New York: John Wiley & Sons.

Keedy, M. L., & Bittinger, M. L. (1987). *Basic mathematics* (5th ed.). Reading, MA: Addison-Wesley.

Streeter, J., & Alexander, G. (1989). *Basic mathematical skills* (2nd ed.). New York: McGraw-Hill.

Wise, A. (1989). *Basic mathematics: Skills, applications, and problem solving* (2nd ed.). San Diego: Harcourt Brace Jovanovich.

Yamato, Y., & Cordon, M. J. (1986). *Mastering mathematical concepts.* San Diego: Harcourt Brace Jovanovich.

GENERAL CORE

PSY 101 - Basic Psychology

Course Overview

Course Description

Presents the basic principles of human behavior and their application to everyday life and work. Topics include: introduction to psychology; social environments; communications and group processes; personality; emotions and motives; conflicts, stress, and anxiety; and perception and learning.

Competency Areas

Introduction to Psychology
Social Environments
Communications and Group Processes
Personality
Emotions and Motives
Conflicts, Stress, and Anxiety
Perception and Learning

Prerequisite

Provisional admission

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

PSY 101 - Basic Psychology

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
INTRODUCTION TO PSYCHOLOGY		**2**	**0**
Definitions	Define psychology.		
Careers in psychology	Identify career options in psychology.		
SOCIAL ENVIRONMENTS		**12**	**0**
Primary relationships	Identify influences of primary relationships.		
Secondary relationships	Identify influences of secondary relationships.		
Rules	Explain/demonstrate rules for human interaction.		
Roles	Identify/explain societal roles and expectations.		
Affiliation	Explain/demonstrate principles of group inclusion.		
COMMUNICATIONS AND GROUP PROCESSES		**10**	**0**
Communications process	Identify/demonstrate the communication process.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
Communication components	Identify communication components.		
Nonverbal agenda	Identify/demonstrate nonverbal cues.		
Communication barriers	Develop strategies to overcome communication barriers.		
Listening	Demonstrate active listening skills.		
Member roles in groups	Determine/perform member roles in groups.		
Leader roles in groups	Determine/perform leader roles in groups.		
PERSONALITY		**6**	**0**
Personality theories	Describe/evaluate personality theories and disorders.		
Types and temperaments	Identify personality types and temperaments.		
	Assess own personality type and temperament.		
EMOTIONS AND MOTIVES		**5**	**0**
Theories of emotions	Identify/evaluate theories of emotions.		
Classification for emotions	Illustrate/identify emotions by facial expression, vocal tone, nonverbal cues, etc.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
Physiological motives	Explain physiological motives.		
Psychological motives	Explain psychological motives.		
CONFLICTS, STRESS, AND ANXIETY		**7**	**0**
Conflict potential	Assess conflict potential in personal/professional relationships.		
Conflict management	Demonstrate strategies to handle conflict effectively.		
Stress causing factors	Cite stress causing factors.		
Stress tolerance/coping	Diagnose personal tolerance.		
	Plan stress coping techniques.		
State/trait anxiety	Identify/explain different anxiety dimensions.		
PERCEPTION AND LEARNING		**8**	**0**
Role of the nervous system	Differentiate between sensation and perception.		
	Describe the role of the nervous system in relaying and processing information.		
Perception process	Identify/explain perception process.		
Perception and reality	Demonstrate perception-reality principles.		
Cognitive view of learning	Identify cognitive view of learning.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Information processing	Explain information processing.		
Learning and reinforcement	Explain positive and negative reinforcement.		

GENERAL CORE

PSY 101 - Basic Psychology

Resources

Books

Baltus, R. K. (1982). *Personal psychology for life and work* (2nd ed.). New York: McGraw-Hill.

Beck, R. C. (1986). *Applying psychology: Understanding people* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Bernstein, D. A., Joy, E. J., Scruss, T. K., & Wilkens, C. D. (1988). *Psychology.* Boston: Houghton Mifflin.

Corey, G. (1985). *I never knew I had a choice* (3rd ed.). Pacific Grove, CA: Brooks-Cole.

Dworetzky, J. P. (1988). *Psychology* (3rd ed.). St. Paul: West.

Houston, J. P., & Bee, H. (1985). *Essentials of psychology* (2nd ed.). San Diego: Harcourt Brace Jovanovich.

Kagan, J. (Ed.). (1988). *Psychology--An introduction* (6th ed.). San Diego: Harcourt Brace Jovanovich.

Parham, A. C. (1988). *Psychology: Studying the behavior of people* (2nd ed.). Cincinnati: South-Western.

GENERAL CORE

ECO 191 - Principles of Economics

Course Overview

Course Description

Provides a description and analysis of economic operations in contemporary society. Emphasis is placed on developing an understanding of economic concepts and policies as they apply to everyday life. Topics include: basic economic principles; economic forces and indicators; capital and labor; price, competition, and monopoly; money and banking; government expenditures, federal and local; fluctuations in production, employment, and income; and the United States economy in perspective.

Competency Areas

Basic Economic Principles
Economic Forces and Indicators
Capital and Labor
Price, Competition, and Monopoly
Money and Banking
Government Expenditures, Federal and Local
Fluctuations in Production, Employment, and Income
United States Economy in Perspective

Prerequisite

Program admission

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

ECO 191 - Principles of Economics

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
BASIC ECONOMIC PRINCIPLES		**7**	**0**
Economics defined	Define economics.		
Modern specialization	List economic impacts of modern specialization.		
Increasing production and consumption	Differentiate between and define gross national product, national income, and disposable personal income.		
ECONOMIC FORCES AND INDICATORS		**7**	**0**
Economic forces and indicators	List economic forces.		
	List ten economic indicators.		
Economic effects	List the economic functions of government.		
Functions of government	List the criteria of sound taxation.		
Analysis of government spending	Discuss tax revenues in the United States.		
Financing government spending	Outline the history and use of federal and state personal income taxes.		
	Discuss corporate income tax.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
	Discuss property tax.		
	Discuss commodity tax.		
CAPITAL AND LABOR		**7**	**0**
Capital tools	State the importance of saving and investment.		
Large scale enterprise	Describe the necessity for markets.		
Labor	List labor population characteristics.		
	Define vocational choice.		
Unemployment	Identify the four types of unemployment.		
	List the causes of each of the four types of unemployment.		
The function of money	List bank sources of deposits.		
The nation's money supply	Define the reserve ratio.		
Bank organization and operation	Discuss expansion of bank reserves.		
The Federal Reserve System	Identify sources of bank reserves.		
The Federal Deposit Insurance Corporation	Describe the service functions of the Federal Reserve System.		
	Discuss the impact of Federal control of the money supply.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Discuss the strengths and weaknesses of the F.D.I.C.		
	Research and identify predicted and current effects of automation on production, employment, and income.		
PRICE, COMPETITION, AND MONOPOLY		8	0
Function of prices	Describe price as an indicator of supply.		
Price determination	Describe the role of competitive cost of product in determination of price.		
Benefits and consequences of competition	Evaluate the interactions between supply and demand in determining product price.		
The extent of competition in the United States and global economies	Define and differentiate between the terms monopoly and oligopoly.		
	Identify the forces that modify and reduce competition.		
	Outline the history of government regulation of competition.		
Increasing real income	Differentiate between and define wages, interest, rents, and profits.		
Income distribution today	Explain supply/demand, income/production, and distribution relationships.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
MONEY AND BANKING		**5**	**0**
Functions of money	Explain the meaning of money in economic terms.		
Nation's money supply	Discuss the establishment and control of the nation's money supply.		
Organization and operation of a bank	Describe sources of deposits and reserves, including reserve ratio and expansion of bank deposits.		
The Federal Reserve System	Discuss the service functions and method of control of money supply by the Federal Reserve System.		
Federal Deposit Insurance Corp (F.D.I.C.)	Explain the function and purpose of the F.D.I.C.		
GOVERNMENT EXPENDITURES, FEDERAL AND LOCAL		**5**	**0**
Economic effect	Discuss effects of federal and local government expenditures on the economy.		
Functions of government	List the major functions of government.		
Analysis of government spending	Analyze and discuss pros and cons of government spending.		
Future outlook	Discuss possibilities for future changes in government spending.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Financing government spending	Explain criteria for sound taxation and describe the various taxes now used to finance government.		
FLUCTUATIONS IN PRODUCTION, EMPLOYMENT, AND INCOME		**5**	**0**
Changes in aggregate spending	Discuss how changes in aggregate spending affect production, employment, and income.		
Output and employment	Explain the relationship between output and employment.		
Other factors affecting economic fluctuations	Describe effect of factors such as: supply and demand; war; technology and automation; and cost-price relationship as they affect the economy.		
Government debt	Describe how the national debt affects the economy.		
UNITED STATES ECONOMY IN PERSPECTIVE		**6**	**0**
Recent economic changes	Explain effects of inflation and recession.		
Present economic problems of U.S. economy	Discuss effects of trade imbalances.		
Communism	Explain the nature of the Soviet State and contrast it to the U.S. economy.		
Common problems	List economic problems common to all forms of government.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Special economic problems of the U.S.	List and describe major problems which affect the American economy today.		

GENERAL CORE

ECO 191 - Principles of Economics

Resources

Books

Amacher, R., & Ulbrich, H. (1989). *Principles of economics* (4th ed.). Cincinnati: South-Western.

Bowden, E. V. (1989). *Economics: The science of common sense* (6th ed.) Cincinnati: South-Western.

Heilbroner, R. L., & Thurow, L. C. (1984). *The economic problem* (7th ed.). Englewood Cliffs, NJ: Prentice Hall.

Hoag, A. J., & Hoag, J. H. (1986). *Introductory economics.* Englewood Cliffs, NJ: Prentice Hall.

Olsen, H., & Kennedy, J. (Latest edition). *Economics: Principles and applications.* Cincinnati: South-Western.

GENERAL CORE

ENG 191 - Composition and Rhetoric I

Course Overview

Course Description

Emphasizes the analysis of literature and articles about issues in the humanities and in society. Students practice various modes of writing, ranging from description to exposition to argumentation and persuasion. The course includes a review of standard grammatical and stylistic usage in proofreading and editing. An introduction to library resources lays the foundation for research. Topics include: modes of writing, revision, and research.

Competency Areas

Modes of Writing
Revision
Research

Prerequisite

Program admission level language competency or ENG 098

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

ENG 191 - Composition and Rhetoric I

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
MODES OF WRITING		**35**	**0**
Description	Write descriptions drawing details from observation.		
Exposition	Read literature and articles and analyze the methods of development.		
	Write essays based on personal experiences or assigned readings.		
	Demonstrate through writing the ability to employ the various methods of development.		
REVISION		**10**	**0**
Editing	Demonstrate the ability to edit own writing to eliminate jargon, choppiness, dullness, and incoherence to produce a smooth, vivid style appropriate to the subject and the audience.		
Proofreading	Demonstrate the ability to proofread own writing to eliminate sentence structure errors, verb and pronoun errors, punctuation errors, and spelling errors.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
RESEARCH		**5**	**0**
Steps	Identify the major steps in conducting research.		
References	Locate and use appropriate reference materials for written and oral reports.		

GENERAL CORE

ENG 191 - Composition and Rhetoric I

Resources

Books

Casty, A., & Tighe, D. J. (1979). *Staircase to writing and reading* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Hodges, J. C., & Whitten, M. E. (1989). *Harbrace college handbook* (11th ed.). San Diego: Harcourt Brace Jovanovich.

Kirszner, L. G., & Mandell, S. R. (1986). *Patterns for college writing: A rhetorical reader and guide* (3rd ed.). New York: St. Martin's Press.

Lunsford, A., & Connors, R. (1989). *The St. Martin's handbook* (5th ed.). New York: St. Martin's Press.

McCuen, J. R., & Winkler, A. C. (1986). *Readings for writers* (5th ed.). San Diego: Harcourt Brace Jovanovich.

Stubbs, M., & Barnet, S. (1989). *Little, Brown reader* (5th ed.). Glenview, IL: Scott, Foresman.

Winkler, A. C., & McCuen, J. R. (1988). *Rhetoric made plain* (5th ed.). San Diego: Harcourt Brace Jovanovich.

GENERAL CORE

MAT 191 - College Algebra

Course Overview

Course Description

Emphasizes techniques of problem solving using algebraic concepts. Topics include: algebraic concepts and operations, linear and quadratic equations and functions, simultaneous equations, inequalities, exponents and powers, graphing techniques, and analytic geometry.

Competency Areas

Algebraic Concepts and Operations
Linear and Quadratic Equations and Functions
Simultaneous Equations
Inequalities
Exponents and Powers
Graphing Techniques
Analytic Geometry

Prerequisite

Program admission level math achievement

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

MAT 191 - College Algebra

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
ALGEBRAIC CONCEPTS AND OPERATIONS		**10**	**0**
Fundamental laws of algebra	Identify fundamental laws of algebra.		
Algebraic expressions	Utilize fundamental laws of algebra to simplify algebraic expressions.		
Equations and formulas	Solve algebraic equations and formulas.		
LINEAR AND QUADRATIC EQUATIONS AND FUNCTIONS		**15**	**0**
Linear equations	Solve linear equations.		
Factoring	Identify all factors of algebraic expressions.		
Fractions	Convert complex algebraic fractions to equivalent forms.		
Quadratic equations	Calculate sum, difference, product, and quotient of algebraic expressions.		
	Solve quadratic equations.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
SIMULTANEOUS EQUATIONS		**9**	**0**
Graphical solutions	Solve systems of linear equations graphically.		
Algebraic solutions	Solve systems of equations algebraically.		
Solutions by determinants	Solve systems of linear equations by using determinants.		
INEQUALITIES		**2**	**0**
Graphical solution	Solve inequalities graphically.		
Algebraic solutions	Solve inequalities algebraically.		
EXPONENTS AND POWERS		**3**	**0**
Laws of exponents	Compute the value of expressions involving exponents.		
Scientific notation	Convert numbers to scientific notation.		
GRAPHING TECHNIQUES		**6**	**0**
Cartesian coordinates	Identify points on a Cartesian plane by given coordinates.		
Graphing functions	Prepare graphs of algebraic equations.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
ANALYTIC GEOMETRY		**5**	**0**
Straight line	Mathematically define a straight line and its properties.		
Conics	Mathematically define and identify the circle, parabola, hyperbola, and ellipse.		

GENERAL CORE

MAT 191 - College Algebra

Resources

Books

Bernice, D. D. (Latest edition). *Arithmetic and algebra* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Bertrand, B. S. (Latest edition). *Basic mathematics for electricity and electronics* (4th ed.). New York: McGraw-Hill.

Christopher, J. (1982). *Introductory technical mathematics.* Englewood Cliffs, NJ: Prentice Hall.

Clar, L. J., & Hart, J. A. (Latest edition). *Mathematics for the technologies.* Englewood Cliffs, NJ: Prentice Hall.

Cooke, N. M., & Adams, H. F. R. (1982). *Basic mathematics for electronics* (5th ed.). New York: McGraw-Hill.

Davis, L. (1990). *Technical mathematics with calculus* (1st ed.). Columbus, OH: Merrill.

Fleming, W., & Varberg, D. (1988). *Algebra and trigonometry* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.

Gilbert, J. (1981). *College algebra and trigonometry.* Englewood Cliffs, NJ: Prentice Hall.

Paul, R. S., & Shaevel, M. L. (Latest edition). *Essentials of technical mathematics with calculus.* Englewood Cliffs, NJ: Prentice Hall.

Radford, L. (1986). *Introduction to technical mathematics with calculus.* Boston: Brenton.

Smith, K. J. (1985). *Precalculus mathematics: A functional approach.* Pacific Grove, CA: Brooks-Cole.

Swokowski, E. W. (1981). *Fundamentals of algebra and trigonometry* (5th ed.). Boston: Prindle, Weber & Schmidt.

Washington, A. J. (1990). *Basic technical mathematics with calculus* (5th ed.). Redwood City, CA: Benjamin-Cummings.

GENERAL CORE

PSY 191 - Introductory Psychology

Course Overview

Course Description

Emphasizes the basics of psychology. Topics include: science of psychology; social environments; life stages; physiology and behavior; personality; emotions and motives; conflicts, stress, anxiety, and abnormal behavior; and perception, learning, and intelligence.

Competency Areas

Science of Psychology
Social Environments
Life Stages
Physiology and Behavior
Personality
Emotions and Motives
Conflicts, Stress, Anxiety, and Abnormal Behavior
Perception, Learning, and Intelligence

Prerequisite

Program admission

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

PSY 191 - Introductory Psychology

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
SCIENCE OF PSYCHOLOGY		**3**	**0**
Definitions	Define psychology.		
History and methods	Identify the founders of the major schools of psychology.		
Careers in psychology	Describe methods used in psychological research.		
	Identify career options in psychology.		
SOCIAL ENVIRONMENTS		**14**	**0**
Definitions	Define social psychology and attitude.		
Attitudes	Differentiate between types of conformity to social norms.		
Attribution theory	Relate attitudes, reputations, and stereotypes to person perceptions.		
Attraction	Describe factors that link attraction and liking.		
Conformity, compliance, obedience, altruism, and deindividuation	Describe how the attribution theory explains behavior and some of its errors.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
Communications	Identify the four main factors in the communication process.		
Group processes	Differentiate between verbal and nonverbal communication.		
	Provide examples of the use of effective and ineffective communications.		
	Practice active listening and nonjudgmental paraphrasing of statements.		
	Define personal space and tell how it affects behavior.		
	List factors in group effectiveness.		
	List stages of group performance.		
LIFE STAGES		**5**	**0**
Physical development	Identify stages of growth and development throughout life span.		
Moral development	Identify theories of moral development.		
Cognitive development	Identify theories of cognitive development.		
PHYSIOLOGY AND BEHAVIOR		**2**	**0**
Nervous and endocrine systems	Describe roles of the nervous and endocrine systems on behavior.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
Altered states of consciousness	Identify altered states of consciousness.		
PERSONALITY		**7**	**0**
Definition	Define personality.		
Theories	Match major theorists with their approaches to personality.		
Assessment	List three methods of assessing personality.		
	Differentiate between objective and projective personality tests.		
	Name and describe personality disorders and types of therapy for each.		
EMOTIONS AND MOTIVES		**4**	**0**
Definitions	Define motive and emotion.		
Needs theory	Relate needs and motives.		
Theories of emotion	List Maslow's hierarchy of needs.		
Expression of emotion	Relate motivation to study habits and career choices.		
	Give examples of verbal and nonverbal means of communicating emotions.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
CONFLICTS, STRESS, ANXIETY, AND ABNORMAL BEHAVIOR		**7**	**0**
Definitions	Define stress, anxiety, and adjustment.		
Locus of control	Define locus of control and recognize own characteristics as internal or external locus of control.		
Types of conflict	Identify the major types of conflict.		
Effects of stress	Relate conflict to pressure and frustration.		
Coping mechanisms	Identify three stages of stress and physiological changes in each.		
Abnormal behavior	Identify direct and defensive coping mechanisms.		
	Name four criteria for labeling behaviors abnormal.		
	Name disorders that result from stress or anxiety and treatments for them.		
PERCEPTION, LEARNING, AND INTELLIGENCE		**8**	**0**
Definitions	Differentiate between sensation and perception.		
Classical conditioning	Identify perceptual constancies.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Operant conditioning	Identify observer characteristics in perception.		
Memory	List examples of distance, depth, and movement perceptions and of visual illusions.		
Cognition	Define learning.		
Theories of learning	Identify theories of learning.		
	Define latent learning, block, and insight.		
	Define memory.		
	Differentiate between short-term and long-term memory.		
	Define cognition, image, and concept.		

GENERAL CORE

PSY 191 - Introductory Psychology

Resources

Books

Benjamin, L. T., et al. (1987). *Psychology.* New York: Macmillan.

Calhoun, J. F., & Acocella, J. R. (1989). *Psychology of adjustment and human relationships* (3rd ed.). New York: Random House.

Carver, C., & Scheier, M. (1988). *Perspectives on personality.* Needham Heights, MA: Allyn & Bacon.

Dworetzky, J. P. (1988). *Psychology* (3rd ed.). St. Paul: West.

Morris, C. (1990). *Psychology: An introduction* (7th ed.). Englewood Cliffs, NJ: Prentice Hall.

Scarr, S., & Zanden, J. V. (1987). *Understanding psychology* (5th ed.). New York: Random House.

Shaffer, D. R. (1988). *Social and personality development* (2nd ed.). Pacific Grove, CA: Brooks-Cole.

Spear, P. D., et al. (1988). *Psychology: Perspectives on behavior.* New York: John Wiley & Sons.

Stanovich, K. E. (1989). *How to think straight about psychology* (2nd ed.). Glenview, IL: Scott, Foresman.

Verderber, K. S., & Verderber, R. F. (1989). *Interact: Using interpersonal communication skills* (5th ed.). Belmont, CA: Wadsworth.

GENERAL CORE

SPC 191 - Fundamentals of Speech

Course Overview

Course Description

Introduces the fundamentals of oral communication. Topics include: selection and organization of materials, preparation and delivery of individual and group presentations, and analysis of ideas presented by others.

Competency Areas

Selection and Organization of Materials
Preparation and Delivery of Individual and
Group Presentations
Analysis of Ideas Presented by Others

Prerequisite

Program admission level language competency or ENG 098

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

GENERAL CORE

SPC 191 - Fundamentals of Speech

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
SELECTION AND ORGANIZATION OF MATERIALS		**5**	**0**
Personal experiences and investigations	Choose and evaluate speech materials from own experience.		
Library resources	Select and evaluate written materials.		
Interviews	Conduct a research interview.		
Credit citations	Document quotations and statistics.		
Speech outline	Organize materials into outline form.		
PREPARATION AND DELIVERY OF INDIVIDUAL AND GROUP PRESENTATIONS		**35**	**0**
Nervousness	Describe the benefits of fear and nervousness for a speaker.		
	List techniques for controlling nervousness.		
Audience, setting, and occasion	Select subject, remarks appropriate to actual and hypothetical audiences, settings, and occasions.		
Informative, persuasive, and ceremonial speeches	Deliver an informative speech.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
	Deliver a persuasive speech.		
	Deliver a ceremonial speech.		
Group discussion and problem solving	Participate in presenting a panel discussion.		
ANALYSIS OF IDEAS PRESENTED BY OTHERS		**10**	**0**
Listening skills	Summarize another speaker's ideas.		
	Ask questions nonjudgmentally.		
Logic and fallacies	Analyze logical method and/or fallacies in speeches by others.		

GENERAL CORE

SPC 191 - Fundamentals of Speech

Resources

Books

Gregory, H. (1987). *Public speaking for college and career.* New York: Random House.

Lucas, S. (1989). *The art of public speaking* (3rd ed.). New York: Random House.

Osborn, M., & Osborn S. (1987). *Public speaking.* Boston: Houghton Mifflin.

Powers, J. (1987). *Public speaking: The lively art.* Belmont, CA: Wadsworth.

Journals

Communication Education
Quarterly Journal of Speech

Magazines

Time
U.S. News and World Report
Specialized magazines adapted to the available majors offered

Newspapers

Chicago Tribune
New York Times
Wall Street Journal
Washington Post

FUNDAMENTAL TECHNICAL

DEN 102 - Head and Neck Anatomy

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
OSTEOLOGY OF THE SKULL		**5**	**0**
Bones of the cranium and face	Identify and label bones and landmarks of the face and cranium.		
MUSCLES OF MASTICATION AND FACIAL EXPRESSION		**3**	**0**
Associated terminology	Define terms related to muscle structure and function. Identify and label muscles of mastication and facial expression.		
TEMPORAL MANDIBULAR JOINT		**2**	**0**
Structure and function of temporal mandibular joint	Identify and label the parts of the temporomandibular joint. Describe the function of the temporomandibular joint. Describe problems related to the temporomandibular joint.		
ARTERIAL AND NERVE SUPPLY OF THE HEAD		**8**	**0**
Blood and nerve supply	Identify and label the arterial and nerve supply of the head.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
SALIVARY GLANDS AND RELATED STRUCTURES		**2**	**0**
Structure and function of salivary glands and related structures	Describe the function of the salivary glands. Identify, label, and describe the function of the following related structures: hard and soft palate, cheek, tongue, frenums, retromolar pad, maxillary, tuberosity, lips, vestibule, tori, and the paranasal sinuses.		

FUNDAMENTAL TECHNICAL

DEN 102 - Head and Neck Anatomy

Resources

Books

Leimone, C. A., & Earl, E. M. (1987). *Dental assisting: Basic and dental sciences.* St. Louis: Mosby.

Short, M. J. (1987). *Essential anatomies: Oral and head/neck.* Albany, NY: Delmar.

Torres, H. O., & Ehrlich, A. (1989). *Modern dental assisting* (4th ed.). Philadelphia: W. B. Saunders.

Slides

Bones of the head and neck - Part I
Bones of the head and neck - Part II

These slide presentations are available through:

National Medical Audiovisual Center
General Services Administration
Washington, DC 20409

FUNDAMENTAL TECHNICAL

DLT 101 - Introduction to Dental Technology

Course Overview

Course Description

Provides students with an overview of dentistry and dental technology. Topics include: historical aspects of dentistry; ethics and jurisprudence related to the dental laboratory; classification, structure, and behavior of pathogenic microbes; body's defense and immunity; modes of disease transmission; CDC, NADL, USPH, and OSHA guidelines for infection control; introduction to equipment; and dental materials.

Competency Areas

Historical Aspects of Dentistry
Ethics and Jurisprudence Related to the Dental Laboratory
Classification, Structure, and Behavior of Pathogenic Microbes
Body's Defense and Immunity
Modes of Disease Transmission
CDC, NADL, USPH, and OSHA Guidelines for Infection Control
Introduction to Equipment
Dental Materials

Prerequisite

Provisional admission

Credit Hours

4

Contact Hours Per Week

Class - 3

D.Lab - 2

FUNDAMENTAL TECHNICAL

DLT 101 - Introduction to Dental Technology

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
HISTORICAL ASPECTS OF DENTISTRY		**4**	**0**
History of dentistry	Compare modern dentistry with ancient, Greek, Roman, and medieval dentistry.		
History of the dental laboratory industry	Identify the dentists and technicians who made a significant contribution to American dentistry.		
ETHICS AND JURISPRUDENCE RELATED TO THE DENTAL LABORATORY		**4**	**0**
Professional organization	Recognize professional organization in the dental field and their role in ethics and jurisprudence.		
Laws relating to dental laboratories	Interpret the responsibilities and statutes pertaining to the dental laboratory industry.		
CLASSIFICATION, STRUCTURE, AND BEHAVIOR OF PATHOGENIC MICROBES		**2**	**0**
Classes of microorganisms	Describe the different classifications of microorganisms.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Identify the structure of each classification of microorganism.		
BODY'S DEFENSE AND IMMUNITY		**1**	**0**
Immunity	Discuss the concept of normal flora and portions of the body supporting a normal flora.		
	Identify internal defense mechanisms.		
	Discuss internal defense mechanisms.		
MODES OF DISEASE TRANSMISSION		**2**	**0**
Disease transmission	Identify the modes of disease transmission.		
	Identify the procedure required to prevent and/or minimize the transmission of disease in the dental laboratory.		
Cross contamination prevention	Discuss procedures involved in preventing cross contamination.		
	Prepare antiseptic and germicidal agents.		
CDC, NADL, USPH, AND OSHA GUIDELINES FOR INFECTION CONTROL		**3**	**0**
Infection control guidelines	Identify the CDC, NADL, and USPH guidelines for infection control in the dental office.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Describe the CDC, NADL, and USPH guidelines for infection control in the dental office.		
	Describe the role of OSHA in enforcing the infection control guidelines.		
INTRODUCTION TO EQUIPMENT		**1**	**0**
Proper use and maintenance of dental laboratory equipment	Discuss the proper use of equipment.		
	Discuss the procedures involved in properly maintaining equipment.		
DENTAL MATERIALS		**13**	**20**
Impression materials	List the uses of all dental impression materials.		
	Prepare alginate and rubber base impression materials.		
Gypsum products	List the uses of all dental laboratory gypsum products.		
	Prepare dentulous and edentulous casts.		
	Prepare casts with removable dies.		
Waxes	Discuss the types and uses of dental waxes.		
	Prepare a waxed crown.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Resins/ceramics	Discuss the types and uses of dental laboratory resins and ceramics.		
	Construct impression trays on dentulous and edentulous casts.		
Metals	List the uses of all dental laboratory metals.		
	Invest a crown.		
	Cast a crown.		
Abrasives	Discuss the types and uses of dental laboratory abrasives.		
	Finish a crown.		
	Polish a crown.		

FUNDAMENTAL TECHNICAL

DLT 101 - Introduction to Dental Technology

Resources

Books

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

FUNDAMENTAL TECHNICAL

DLT 102 - Physics and Chemistry of Dental Materials

Course Overview

Course Description

Introduces the student to the materials used in the dental office and dental laboratory. General chemical and physical science are discussed and applied to the selection and use of materials in the laboratory. Topics include: general chemistry and physics, impression materials, gypsum products, waxes, metallurgy, resins and ceramics, and dental abrasives and polishes.

Competency Areas

General Chemistry and Physics
Impression Materials
Gypsum Products
Waxes
Metallurgy
Resins and Ceramics
Dental Abrasives and Polishes

Prerequisite

Program admission

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

FUNDAMENTAL TECHNICAL

DLT 102 - Physics and Chemistry of Dental Materials

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
GENERAL CHEMISTRY AND PHYSICS		**18**	**0**
Major systems of measure in the scientific field	Identify the scope of chemistry. Identify the major units of measurement of the metric and avoirdupois systems.		
Matter and energy	Clarify the states of matter and how they can be converted from one form to another.		
Atoms of the periodic table	Identify the elements of the periodic table and how their individual makeup affects their physical properties.		
Molecules and chemical bonding	Describe chemical action and chemical formulas.		
Chemical nomenclature	Describe the naming of compounds, acids, etc.		
Structure of matter	Describe the possibilities of states of matter, atomic bonds, physical forces, and crystalline structure.		
Adhesion and cohesion	Describe the forces that affect bonding.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Physical and biological properties of materials	Describe the physical properties that materials are subject to and the biological considerations for intraoral use. Define the physical properties that materials are subject to and the biological considerations for intraoral use.		
IMPRESSION MATERIALS		**6**	**0**
Nonelastomeric impression materials	Classify nonelastomeric materials and their primary advantages and disadvantages.		
Plastic impression materials	Classify the various uses, pros, and cons for plastic materials.		
Elastomeric impression materials	Classify the various uses, pros, and cons for hydrocolloid and elastomeric materials.		
GYPSUM PRODUCTS		**4**	**0**
Dental stone	Clarify the physical and clinical reaction processes of various dental gypsum products. Compare the physical and clinical reaction processes of various dental gypsum products.		
Gypsum investments	Identify the composition, uses, and problems associated with the use of dental investments.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
WAXES		**2**	**0**
Identification and vocation	Identify the sources, uses, and problems associated with the use of dental waxes.		
METALLURGY		**13**	**0**
Gold alloys	Identify the composition, solidification and structure, tarnish and corrosion resistance, and control of physical properties of dental casting alloy.		
Casting methods	Describe the clarifications use and casting techniques for gold alloys.		
Solders	Identify the principles of soldering and the appropriate choice of solders for precious and nonprecious alloys.		
Nonprecious alloys	Describe the composition, structure, processing technique, and general use of nonprecious alloys.		
RESINS AND CERAMICS		**5**	**0**
Dental resins applications	Describe the uses, composition, polymerization stages, biological requisites, and precautions for dental resins.		
Dental porcelains	Describe the composition and uses of dental porcelains.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
DENTAL ABRASIVES AND POLISHES		**2**	**0**
Classification and use of abrasives	Classify various abrasives and their primary uses in dentistry.		

FUNDAMENTAL TECHNICAL

DLT 102 - Physics and Chemistry of Dental Materials

Resources

Books

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Phillips, R. W. (1984). *Elements of dental materials for hygienists and assistants.* Philadelphia: W. B. Saunders.

Charts

Periodic table
Metric system
Dental alloys

Journals

Quintessence of dental technology

This journal is available through:

Quintessence Publishing Company, Inc.
Chicago, IL

Slides

The science of dental materials (Lessons 1-10)

This slide presentation is available through:

Multi-Media Publishing, Inc.
Denver, CO

FUNDAMENTAL TECHNICAL

DLT 103 - Tooth Morphology

Course Overview

Course Description

Focuses on oral anatomy, dental anatomy, and occlusion with the emphasis on dental morphology. Laboratory exercises incorporate waxing procedures. Topics include: dental terminology, tooth morphology and waxing procedures, and primary and mixed dentition.

Competency Areas

Dental Terminology
Tooth Morphology and Waxing Procedures
Primary and Mixed Dentition

Prerequisite

Program admission

Credit Hours

3

Contact Hours Per Week

Class - 2

D.Lab - 3

FUNDAMENTAL TECHNICAL

DLT 103 - Tooth Morphology

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
DENTAL TERMINOLOGY		**5**	**0**
Dental anatomy and terminology	Define terms of orientation and dental anatomy.		
	Use terms of orientation and dental anatomy.		
	Compare the three tooth classification systems.		
TOOTH MORPHOLOGY AND WAXING PROCEDURES		**12**	**30**
Morphological features	Describe morphological features of maxillary and mandibular centrals.		
	Describe morphological features of maxillary and mandibular laterals.		
	Describe morphological features of maxillary and mandibular cuspids.		
	Describe morphological features of maxillary and mandibular biscuspids.		
	Describe morphological features of maxillary molars.		
	Describe morphological features of mandibular molars.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Waxing procedures	Differentiate two basic waxing techniques. Perform waxing procedure for maxillary and mandibular centrals. Perform waxing procedure for maxillary and mandibular laterals. Perform waxing procedure for maxillary and mandibular cuspids. Perform waxing procedure for maxillary and mandibular bicuspids. Perform waxing procedure for maxillary molars. Perform waxing procedures for maxillary and mandibular molars.		
PRIMARY AND MIXED DENTITION		**3**	**0**
Primary and mixed dentition	Describe the significance of mixed dentition in maintaining proper oral health. Differentiate anatomy of primary teeth versus permanent teeth.		

FUNDAMENTAL TECHNICAL

DLT 103 - Tooth Morphology

Resources

Books

Brand, R., & Isselhard, D. E. (1990). *Anatomy of orofacial structures* (4th ed.). St. Louis: Mosby.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Short, M. J. (1989). *Essential oral anatomies: Teeth, head, and neck.* Albany, NY: Delmar.

Journals

Quintessence of dental technology

This journal is available through:

Quintessence Publishing Company, Inc.
Chicago, IL

Models

Viade Typodont #2600
P.K. Thomas Molds #3044, 3300, & 3310

Slides

Ney - *Introduction to posterior tooth anatomy*

Videotapes

Isenberg, B., Hughes, M., & Wright, W. *Dental anatomy* (Vols. 1-10). University of Alabama School of Dentistry.

FUNDAMENTAL TECHNICAL

DLT 104 - Principles of Occlusion

Course Overview

Course Description

Emphasizes advanced techniques in waxing of restorations. Laboratory exercises incorporate waxing of cusp-fossa and cusp-ridge centric occlusion on adjustable articulators. Topics include: tooth landmarks, TMJ functions, dental articulators, and positive waxing techniques.

Competency Areas

Tooth Landmarks
TMJ Functions
Dental Articulators
Positive Waxing Techniques

Prerequisites

DLT 101, DLT 103

Credit Hours

3

Contact Hours Per Week

Class - 2

D.Lab - 3

FUNDAMENTAL TECHNICAL

DLT 104 - Principles of Occlusion

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
TOOTH LANDMARKS		**5**	**0**
Tooth landmarks	Identify all tooth landmarks.		
Tooth morphology	Differentiate the morphology that makes each tooth different.		
TMJ FUNCTIONS		**5**	**0**
Functions	Discuss the relationship of the TMJ as it applies to the functions of the human jaw.		
DENTAL ARTICULATORS		**5**	**2**
Articulators	Describe the purpose of and differences between simple, semiadjustable, and adjustable articulators.		
Case mounting	Mount a case on a semiadjustable articulator with a facebow. Set adjustments on the articulator.		
POSITIVE WAXING TECHNIQUES		**5**	**28**
Positive and negative waxing theory	Discuss the theory of positive and negative waxing.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Waxing	Discuss the theory of cusp-fossa waxing and cusp-ridge waxing. Articulate a positive waxing. Model on a semiadjustable arcon articulator. Wax upper and lower positive arches using cusp-fossa techniques.		

FUNDAMENTAL TECHNICAL

DLT 104 - Principles of Occlusion

Resources

Books

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Sowter, J. (1972). *Dental laboratory technology, dental anatomy.* Chapel Hill, NC: University of North Carolina.

Sowter, J. (1972). *Dental laboratory technology: Fixed prosthodontics.* Chapel Hill, NC: University of North Carolina.

SPECIFIC TECHNICAL

DLT 111 - Removable Partial Dentures

Course Overview

Course Description

Introduces the materials and techniques used in the fabrication of removable partial dentures. Topics include: materials used in removable partial dentures, preparatory procedures, removable partial denture fabrication procedures, and post-fabrication procedures.

Competency Areas

Materials Used in Removable Partial Dentures
Preparatory Procedures
Removable Partial Denture Fabrication Procedures
Post-Fabrication Procedures

Prerequisites

DLT 101, DLT 102, DLT 103

Credit Hours

6

Contact Hours Per Week

Class - 2

D.Lab - 8

SPECIFIC TECHNICAL

DLT 111 - Removable Partial Dentures

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
MATERIALS USED IN REMOVABLE PARTIAL DENTURES		**2**	**0**
Dental materials	Demonstrate the use of dental materials in the construction of removable partial dentures.		
PREPARATORY PROCEDURES		**8**	**10**
Preliminary impressions and study casts	Discuss the purpose and trimming procedures for pouring preliminary models.		
	Pour preliminary models.		
	Trim preliminary models.		
Custom impression trays for final models	Discuss the purpose, types, and procedures used in fabricating custom impression trays.		
	Fabricate custom impression trays.		
Bases, occlusal rims, and articulations	Discuss the purpose, types, and procedures used in fabricating reload bases and occlusal rims.		
	Fabricate reload bases and occlusal rims.		
	Mount casts on an articulator.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
REMOVABLE PARTIAL DENTURE FABRICATION PROCEDURES		**8**	**62**
Survey and design	State the procedures to survey, categorize, design, and draw the design of the removable partial denture on the preliminary model.		
Design transfer blockout, relief, and beading	Discuss the purpose of blockout, relief, and beading removable partial denture model.		
	Survey the design.		
	Transfer the design to the master model.		
	Blockout the model.		
	Relieve the model.		
	Bead the model.		
Refractory cast	Discuss the purpose of duplicating and fabricating the refractory cast.		
	Construct a refractory cast.		
Waxing and sprueing	Discuss the purpose of waxing and sprueing the removable partial denture.		
	Wax the removable partial denture.		
	Sprue the removable partial denture.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Investing, burnout, and casting	Discuss the purpose of investing, burnout, and casting the removable partial denture.		
	Invest the removable partial denture.		
	Burnout the removable partial denture.		
	Cast the removable partial denture.		
Finishing and polishing	Discuss the purpose of finishing and polishing the removable partial denture.		
	Finish the removable partial denture.		
	Polish the removable partial denture.		
Selecting, arranging, and waxing teeth	Discuss the purpose of selecting and arranging the teeth.		
	Arrange the teeth on the removable partial denture.		
	Wax the teeth on the removable partial denture.		
Flasking, processing, and finishing	Discuss the purpose of flasking, processing, and finishing the removable partial denture.		
POST-FABRICATION PROCEDURES		**2**	**8**
Metal repairs	Discuss the various metal repairs.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Resin repairs	Discuss the various resin repairs.		
	Repair a clasp on a removable partial denture.		
Tooth repairs	Discuss the various tooth repairs.		
	Replace a broken tooth.		

SPECIFIC TECHNICAL

DLT 111 - Removable Partial Dentures

Resources

Books

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Rudd, K., Morrow, R., & Rhoads, J. (1985). *Dental laboratory procedures: Removable partial dentures* (Vol. 3). (2nd ed.). St. Louis: Mosby.

Sowter, J. (1986). *Dental laboratory technology, removable prosthodontics.* Chapel Hill, NC: University of North Carolina.

SPECIFIC TECHNICAL

DLT 112 - Crown and Bridge

Course Overview

Course Description

Introduces the materials and techniques used in the fabrication of fixed crown and bridge restorations. Topics include: materials used in crown and bridge fabrication, preparatory procedures, fixed crown and bridge fabrication procedures, and post-fabrication procedures.

Competency Areas

Materials Used in Crown and Bridge Fabrication
Preparatory Procedures
Fixed Crown and Bridge Fabrication Procedures
Post-Fabrication Procedures

Prerequisites

DLT 101, DLT 102, DLT 103

Prerequisite/Corequisite

DLT 104

Credit Hours

6

Contact Hours Per Week

Class - 2

D.Lab - 8

SPECIFIC TECHNICAL

DLT 112 - Crown and Bridge

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
MATERIALS USED IN CROWN AND BRIDGE FABRICATION		**2**	**0**
Dental materials	Demonstrate the use of dental materials in crown and bridge construction.		
PREPARATORY PROCEDURES		**8**	**10**
Casts	Identify the various impression materials used for fixed appliances. Demonstrate procedures for pouring a crown and bridge impression. Develop a working cast with removable dies and exposed margins. Mount casts on an articulator.		
FIXED CROWN AND BRIDGE FABRICATION PROCEDURES		**8**	**62**
Waxing patterns	Identify types of waxes used in crown and bridge fabrication. Demonstrate procedures for waxing single unit full cast wax patterns. Evaluate wax contoured patterns.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Sprueing the wax pattern	Discuss different sprueing techniques.		
	Demonstrate sprueing procedures.		
	Evaluate sprueing procedures.		
Investing	Explain the process for investing the wax patterns.		
	Demonstrate investing techniques.		
	Describe investing materials.		
Wax elimination	Describe wax elimination equipment.		
	Demonstrate wax elimination procedures.		
Casting	Explain different casting equipment.		
	Demonstrate casting procedures.		
	Evaluate quality of casting.		
Finishing/polishing	Describe types of finishing/polishing materials.		
	Perform finishing/polishing procedures.		
	Evaluate finished and polished case.		
POST-FABRICATION PROCEDURES		**2**	**8**
Corrections	Explain corrective procedures.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Demonstrate use of solder for repairs.		

SPECIFIC TECHNICAL

DLT 112 - Crown and Bridge

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 113 - Complete Dentures

Course Overview

Course Description

Focuses on complete denture fabrication from the preliminary impression to the finished denture. Topics include: materials used in complete dentures, preparatory procedures for complete dentures, complete denture fabrication procedures, and post-fabrication procedures.

Competency Areas

Materials Used in Complete Dentures
Preparatory Procedures for Complete Dentures
Complete Denture Fabrication Procedures
Post-Fabrication Procedures

Prerequisites/Corequisites

DLT 101, DLT 102, DLT 103

Credit Hours

6

Contact Hours Per Week

Class - 2

D.Lab - 8

SPECIFIC TECHNICAL

DLT 113 - Complete Dentures

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
MATERIALS USED IN COMPLETE DENTURES		**2**	**0**
Dental materials	Demonstrate the use of dental materials in the construction of complete dentures.		
PREPARATORY PROCEDURES FOR COMPLETE DENTURES		**8**	**10**
Preliminary impressions and custom trays	Identify the various impression materials used for preliminary impressions.		
	Discuss the procedures involved in the construction of custom impression trays.		
	Construct impression trays.		
Final impressions and master casts	Identify the impression materials used for final impressions.		
	Select dental stones.		
	Manipulate dental stones.		
	Construct master casts.		
	Evaluate master casts.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Record bases and occlusion rims	Discuss the purpose of and the requirements for record bases and occlusion rims.		
	Describe three methods of constructing record bases.		
	Construct record bases and occlusion rims.		
	Mount casts on an articulator.		
COMPLETE DENTURE FABRICATION PROCEDURES		**8**	**62**
Articulators	Define the terms: hinge axis, facebow, and articulator.		
	Describe the purpose of an articulator.		
	Perform maintenance procedures on articulators.		
Theories of occlusion for complete dentures	Discuss the two bases of all theories of occlusion.		
	Explain the three basic philosophies of occlusion.		
Tooth selection	List the seven anatomic guides used in selecting anterior teeth for size.		
	State the factors and guides used in selecting anterior teeth for form.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Compare acrylic resin teeth with porcelain teeth.		
Arrangement of artificial teeth	State six factors that affect the arrangement of anterior teeth.		
	List four factors that influence the arrangement of posterior teeth.		
	Arrange anterior and posterior teeth on mounted casts.		
Wax contouring	Discuss the requirements of wax contouring.		
	Wax denture bases for complete dentures.		
	Evaluate wax contoured denture bases.		
Flasking, boilout, packing, and processing	Explain the procedures involved in flasking complete dentures.		
	Describe the boilout process.		
	State the purpose of trial packaging.		
	Manipulate the acrylic resin.		
	Pack complete dentures.		
	List the times and temperatures used in processing dentures using the slow and the fast cure method.		
	Process complete dentures.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Deflasking	State three precautions that must be preserved in deflasking a denture.		
	Deflask complete dentures.		
Laboratory remount	Discuss the purpose of the laboratory remount.		
	Remount complete dentures.		
	Correct the processing errors by grinding in the occlusion on remounted dentures.		
Finishing and polishing	List the sequential steps in finishing and polishing complete dentures.		
	Finish complete dentures.		
	Polish complete dentures.		
POST-FABRICATION PROCEDURES		**2**	**8**
Repairs	List the sequential steps in repairing a denture with broken anterior and posterior teeth.		
	Discuss the procedures involved in repairing a denture base that has been fractured.		
	Repair complete dentures.		
Relines and rebases	Differentiate between relining and rebasing complete dentures.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Discuss the procedures involved in relining a denture base using each of the three accepted methods.		
	Discuss the rationale for rebasing dentures.		
	Explain the procedures involved in rebasing a denture.		
	Reline complete dentures.		
	Rebase complete dentures.		

SPECIFIC TECHNICAL

DLT 113 - Complete Dentures

Resources

Books

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Rudd, K., Morrow, R., & Rhoads, J. (1985). *Dental laboratory procedures: Removable partial dentures* (Vol. 3). (2nd ed.). St. Louis: Mosby.

Sowter, J. (1986). *Dental laboratory technology, removable prosthodontics.* Chapel Hill, NC: University of North Carolina.

SPECIFIC TECHNICAL

DLT 114 - Dental Ceramics

Course Overview

Course Description

Introduces the materials and techniques used in the fabrication of dental ceramic restorations. Topics include: materials used in dental ceramics, preparatory procedures, ceramic fabrication procedures, and post-fabrication procedures.

Competency Areas

Materials Used in Dental Ceramics
Preparatory Procedures
Ceramic Fabrication Procedures
Post-Fabrication Procedures

Prerequisites

DLT 101, DLT 102, DLT 103

Credit Hours

6

Contact Hours Per Week

Class - 2

D.Lab - 8

SPECIFIC TECHNICAL

DLT 114 - Dental Ceramics

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
MATERIALS USED IN DENTAL CERAMICS		**2**	**2**
Dental materials	Demonstrate the use of dental materials in the construction of dental ceramics.		
PREPARATORY PROCEDURES		**8**	**12**
Casts	Construct working casts.		
	Fabricate removable dies.		
	Identify various types of margins.		
	Expose margins.		
Substructure	Describe various single unit substructure designs.		
Metal fabrication	Wax metal condition single unit ceramic substructures.		
	Sprue metal condition single unit ceramic substructures.		
	Invest metal condition single unit ceramic substructures.		
	Burnout metal condition single unit ceramic substructures.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Cast metal condition single unit ceramic substructures.		
	Finish metal condition single unit ceramic substructures.		
CERAMIC FABRICATION PROCEDURES		**8**	**64**
Opaque	Opaque single unit ceramic substructures.		
Buildup	Demonstrate single unit ceramic buildup on a metal substructure.		
Completion	Fire single unit ceramic crowns.		
	Grind single unit ceramic crowns.		
	Contour single unit ceramic crowns.		
	Glaze single unit ceramic crowns.		
POST-FABRICATION PROCEDURES		**2**	**2**
Ceramic repairs	Perform single unit ceramic repairs.		
Ceramic troubleshooting	Identify ceramic substructure design problems.		
	Describe opaque and ceramic buildup problems.		
	Discuss ceramic firing problems.		

SPECIFIC TECHNICAL

DLT 114 - Dental Ceramics

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 115 - Orthodontics/Pedodontics

Course Overview

Course Description

Introduces the principles of orthodontic treatment with removable appliances. Topics include: principles of occlusion and malocclusion, materials and instruments, orthodontic model preparation, design of orthodontic appliances, and advances in orthodontic treatment.

Competency Areas

Principles of Occlusion and Malocclusion
Materials and Instruments
Orthodontic Model Preparation
Design of Orthodontic Appliances
Advances in Orthodontic Treatment

Prerequisites

DLT 101, DLT 103

Credit Hours

3

Contact Hours Per Week

Class - 1

D.Lab - 4

SPECIFIC TECHNICAL

DLT 115 - Orthodontics/Pedodontics

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
PRINCIPLES OF OCCLUSION AND MALOCCLUSION		1	3
Classification of malocclusion	Identify types of malocclusion. Relate principles of movement to types of malocclusion.		
Principles of tooth movement	Describe how forces must be applied to affect tooth movement.		
MATERIALS AND INSTRUMENTS		1	3
Orthodontic wire	Clarify types and use of ortho wire.		
Orthodontic instruments	Identify the types and uses of bending pliers and equipment.		
Orthodontic resins	Identify the types and uses of orthodontic resins.		
ORTHODONTIC MODEL PREPARATION		1	4
Model trimming	Calculate practical as well as esthetic angles for study models. Perform model trimming procedure.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
DESIGN OF ORTHODONTIC APPLIANCES		**6**	**27**
Wire bending	Perform wire bending techniques for archwires, clasps, space maintainers, and springs.		
Hawley type appliances	Prepare the cast for appliance.		
	Bend wires for Hawley.		
	Apply acrylic to base of Hawley.		
Fixed appliances	Construct space maintainer.		
	Modify bands.		
	Construct space regainer.		
Removable appliances	Relate the use for and the construction techniques of the Anderson, Crozat, bite plane, Positioner, Nance, and Swartz.		
Basic soldering techniques	Describe the principles of different soldering techniques.		
	Demonstrate flame control and soldering techniques.		
Mouth protectors and night guards	Describe materials and construction techniques of mouth protectors and night guards.		
	Perform construction of Vacuform mouthguard.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
ADVANCES IN ORTHODONTIC TREATMENT		**1**	**3**
New trends and technologies	Research modern and emerging orthodontic techniques. Relate modern and emerging orthodontic techniques. Research the use of an established orthodontic appliance. Relate the use of an established orthodontic appliance.		

SPECIFIC TECHNICAL

DLT 115 - Orthodontics/Pedodontics

Resources

Books

Adams, P. C. (Latest edition). *The design and construction of removable orthodontic appliances*. Bristol, England: John Wright & Sons Ltd.

Hayes, P. (1988). *Orthodontics for the lab technician.* Wauwatosa, WI: Author.

Nash, P. E. (Ed.). (1986). *Removable orthodontics/simple tooth movement - technical consideration*. Milton, FL: Little House Book Co.

Rudd, K. D., Morrow, R., & Rhoads, J. (1985). *Dental laboratory procedures: Removable partial dentures* (Vol. 3). (2nd ed.). St. Louis: Mosby.

U.S. Department of Health, Education, and Welfare. (Latest edition). *Pedodontic appliances.* Washington, DC: Author.

Videotapes

Fabricating the appliance - space maintainer (3/4" video)

This videotape is available through:

Quercus Corporation (From Project A Corde)
Castro Valley, CA

Basic orthodontic soldering techniques (3/4" video)
Basic wire bending techniques (3/4" video)
Orthodontic model trimming (3/4" video)
Wire bending for removable acrylic appliances (3/4" video)

These videotapes are available through:

The University of Michigan
School of Dentistry
Ann Arbor, MI

SPECIFIC TECHNICAL

DLT 116 - Fixed Prosthodontics Practicum

Course Overview

Course Description

Introduces students to the application and reinforcement of basic fixed prosthodontic principles in an actual job setting or practicum experience. Students are acquainted with occupational responsibilities through realistic work situations on the job. Topics include, but are not limited to: problem solving, adaptability to the job setting, use of proper interpersonal skills, interpretation of work authorizations, application of basic fixed prosthodontic techniques, and professional development. The occupation-based instruction is implemented through the use of written individualized training plans, written performance evaluation, a required weekly seminar, and required practicum or on-the-job training.

Competency Areas

Problem Solving
Adaptability to the Job Setting
Use of Proper Interpersonal Skills
Interpretation of Work Authorizations
Application of Basic Fixed Prosthodontic Techniques
Professional Development

Prerequisites

DLT 112, DLT 114

Prerequisite/Corequisite

DLT 115

Credit Hours

10

Contact Hours Per Week

Class - 0

O.B.I. - 32

SPECIFIC TECHNICAL

DLT 116 - Fixed Prosthodontics Practicum

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
PROBLEM SOLVING		**0**	**10**
Problem solving on the job	Use problem solving techniques in the job setting.		
ADAPTABILITY TO THE JOB SETTING		**0**	**4**
Directions	Follow directions as given by supervisory staff.		
USE OF PROPER INTERPERSONAL SKILLS		**0**	**6**
Interaction with others	Interact effectively with others in the job setting.		
Listening	Demonstrate ability to listen to others.		
INTERPRETATION OF WORK AUTHORIZATIONS		**0**	**20**
Work authorizations	Interpret work authorizations to produce acceptable dental prostheses.		
APPLICATION OF BASIC FIXED PROSTHODONTIC TECHNIQUES		**0**	**270**
Preparatory	Pour casts with removable dies.		

Recommended Outline	After completing this section, the student will:	Hours Class	OBI
	Mount casts on articulator.		
Crown and bridge	Wax crowns and pontics.		
	Invest waxed crowns and pontics.		
	Burnout metal crowns and bridges.		
	Cast metal crowns and bridges.		
	Finish metal crowns and bridges.		
	Polish metal crowns and bridges.		
Ceramics	Wax ceramic substructures.		
	Invest ceramic substructures.		
	Burnout ceramic substructures.		
	Cast ceramic substructures.		
	Finish ceramic substructures.		
	Apply opaque to ceramic substructures.		
Opaque	Apply opaque to substructures.		
Contouring	Apply porcelain to substructures.		
	Contour porcelain to substructures.		
PROFESSIONAL DEVELOPMENT		**0**	**10**
Professionalism	Conduct him/herself in a professional manner.		

SPECIFIC TECHNICAL

DLT 116 - Fixed Prosthodontics Practicum

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

3 Party Contract

SPECIFIC TECHNICAL

DLT 117 - Removable Prosthodontics Practicum

Course Overview

Course Description

Introduces students to the application and reinforcement of basic removable prosthodontic principles in an actual job setting or practicum experience. Students are acquainted with occupational responsibilities through realistic work situations on the job. Topics include, but are not limited to: problem solving, adaptability to the job setting, use of proper interpersonal skills, interpretation of work authorizations, application of basic removable prosthodontic techniques, and professional development. The occupation-based instruction is implemented through the use of written individualized training plans, written performance evaluation, a required weekly seminar, and required practicum or on-the-job training.

Competency Areas

Problem Solving
Adaptability to the Job Setting
Use of Proper Interpersonal Skills
Interpretation of Work Authorizations
Application of Basic Removable Prosthodontic Techniques
Professional Development

Prerequisites

DLT 111, DLT 113

Prerequisite/Corequisite

DLT 115

Credit Hours

10

Contact Hours Per Week

Class - 0

O.B.I. - 32

SPECIFIC TECHNICAL

DLT 117 - Removable Prosthodontics Practicum

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
PROBLEM SOLVING		**0**	**10**
Problem solving on the job	Use problem solving techniques in the job setting.		
ADAPTABILITY TO THE JOB SETTING		**0**	**4**
Directions	Follow directions as given by supervisory staff.		
USE OF PROPER INTERPERSONAL SKILLS		**0**	**6**
Interaction with others	Interact effectively with others in the job setting.		
Listening	Demonstrate ability to listen to others.		
INTERPRETATION OF WORK AUTHORIZATIONS		**0**	**20**
Work authorizations	Interpret work authorizations to produce acceptable dental prostheses.		
APPLICATION OF BASIC REMOVABLE PROSTHODONTIC TECHNIQUES		**0**	**270**
Preparatory	Pour dentulous and edentulous casts.		

Recommended Outline	After completing this section, the student will:	Hours Class OBI
	Construct custom impression trays.	
	Construct record bases and occlusion rims.	
	Mount dentulous and edentulous casts on articulators.	
Removable partial dentures	Blockout master casts.	
	Duplicate master casts.	
	Wax removable partial denture framework.	
	Invest removable partial denture framework.	
	Cast removable partial denture framework.	
	Finish removable partial denture framework.	
	Polish removable partial denture framework.	
Complete dentures	Arrange artificial teeth for complete dentures.	
	Wax denture bases.	
	Flask complete dentures.	
	Boilout complete dentures.	
	Pack complete dentures.	

Recommended Outline	After completing this section, the student will:	Hours Class	OBI
	Deflask complete dentures.		
	Finish complete dentures.		
	Polish complete dentures.		
PROFESSIONAL DEVELOPMENT		**0**	**10**
Professionalism	Conduct him/herself in a professional manner.		

SPECIFIC TECHNICAL

DLT 117 - Removable Prosthodontics Practicum

Resources

Books

Adams, P. C. (Latest edition). *The design and construction of removable orthodontic appliances*. Bristol, England: John Wright & Sons Ltd.

Hayes, P. (1988). *Orthodontics for the lab technician.* Wauwatosa, WI: Author.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Nash, P. E. (Ed.). (1986). *Removable orthodontics/simple tooth movement - technical consideration*. Milton, FL: Little House Book Co.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Removable partial dentures* (Vol. 3). (2nd ed.). St. Louis: Mosby.

Sowter, J. (1986). *Dental laboratory technology, removable prosthodontics.* Chapel Hill, NC: University of North Carolina.

U.S. Department of Health, Education, and Welfare. (Latest edition). *Pedodontic appliances.* Washington, DC: Author.

3 Party Contract

Videotapes

Fabricating the appliance - space maintainer (3/4" video)

This videotape is available through:

Quercus Corporation (From Project A Corde)
Castro Valley, CA

Basic orthodontic soldering techniques (3/4" video)
Basic wire bending techniques (3/4" video)

Orthodontic model trimming (3/4" video)
Wire bending for removable acrylic appliances (3/4" video)

These videotapes are available through:

The University of Michigan
School of Dentistry
Ann Arbor, MI

SPECIFIC TECHNICAL

DLT 201 - Principles of Laboratory Management

Course Overview

Course Description

Focuses on the necessary information and techniques needed to manage a dental laboratory. Topics include: dental laboratory ownership, organization, and management; marketing; personnel management; production management; and finances.

Competency Areas

Dental Laboratory Ownership, Organization,
and Management
Marketing
Personnel Management
Production Management
Finances

Prerequisite

Program admission

Credit Hours

5

Contact Hours Per Week

Class - 5

Lab - 0

SPECIFIC TECHNICAL

DLT 201 - Principles of Laboratory Management

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
DENTAL LABORATORY OWNERSHIP, ORGANIZATION, AND MANAGEMENT		**10**	**0**
Unincorporated business	Differentiate between sole proprietorships and partnerships.		
	Discuss the advantages and disadvantages of sole proprietorship.		
	Discuss the advantages and disadvantages of a partnership.		
Incorporated business	Define corporation as defined by Chief Justice John Marshall.		
	Discuss the various types of corporations.		
	State the advantages and disadvantages of a corporation.		
Organizing for management	Select a type of business ownership.		
	Discuss the organizing process.		
	Design an organizational plan for the selected type of ownership.		
Management activities	Define the three levels of management.		

Recommended Outline	After completing this section, the student will:	Hours Class	Lab
	State the steps in decision making.		
	Discuss the seven functions of management.		
	Compare the various styles of leadership.		
MARKETING		**10**	**0**
Marketing management	Define marketing.		
	Discuss the marketing concept.		
	Identify the eight basic functions of marketing.		
	Categorize the eight basic functions of marketing.		
	Develop a marketing strategy for a dental laboratory.		
Products and their distribution	Compare the two broad categories of products.		
	Discuss the product life cycle.		
Advertising	Discuss the relationship of advertising to selling.		
	Explain each of the two types of advertising.		
	List the five steps taken to ensure truth in advertising.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Develop a promotional plan for a dental laboratory.		
Prices and pricing	Identify the seven pricing goals.		
	Discuss the two basic approaches in determining selling prices.		
	Develop a pricing policy for a dental laboratory.		
Credits and collections	Discuss the two main procedures for proper credit management.		
	Develop a collection policy for a dental laboratory.		
PERSONNEL MANAGEMENT		**10**	**0**
Employee selection and training	Discuss each of the three problems involved in selecting and training employees.		
	Define the terms job analysis, job description, and job specification.		
	Explain the implications of the legal restrictions on hiring policies.		
	Discuss the six steps involved in the employment process.		
Employee compensation	Compare the three wage theories.		
	Discuss the factors that actually determine wages.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Select three methods of wage payment.		
	Explain how the methods of wage payment would be applicable to a dental laboratory.		
People as personalities	Explain each of the five steps used in learning about people.		
	Discuss the six rules of helping people by teaching.		
Setting high standards	Describe how standards affect performance.		
	Define the term "tough minded."		
	Give three examples of "tough minded."		
	Discuss the three steps that make high standards more acceptable to an organization.		
Delegating authority	Discuss the key principle involved in delegating authority.		
	Identify the eight keys to delegation.		
Decision making	Discuss the three problems connected with decision making.		
	Explain each of the seven procedures involved in decision making.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Develop a personnel policy for a dental laboratory.		
PRODUCTION MANAGEMENT		**5**	**0**
Location and layout	Select an ideal location for a dental laboratory.		
	Explain the factors considered in locating a dental laboratory.		
	Discuss a building type and an overall layout of an ideal dental laboratory.		
	Identify a site for a full service dental laboratory.		
	Design a full service dental laboratory.		
Production management	Discuss the evolution of scientific management.		
	State the reasons why production organization is important.		
	Explain the necessity for a time and motion study.		
	Discuss the four basic steps in production control.		
Scheduling	Discuss why scheduling is one of the key processes in the successful operation of a dental laboratory.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Explain the requirements for a dental laboratory scheduling system.		
FINANCES		**15**	**0**
Short and long term financing	Define the terms fixed capital, circulating capital, and bond.		
	Discuss how noncorporate and corporate financing is accomplished.		
	State four advantages of short term financing.		
	Describe each of the five types of short term financing.		
	Identify four types of assets generally used for security.		
Financial policies and problems	List three common refinancing plans and explain each.		
	Discuss business combinations.		
Risk management and insurance	Define risk.		
	Discuss the four categories of risks.		
	Discuss the five characteristics of insurable risks.		
	Compare property and casualty insurance with life insurance.		
Business accounting	Define the various terms used in accounting.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Discuss the three accounting elements.		
	Express the relationship between the accounting elements by writing the equation.		
	Differentiate between the income statement and the balance sheet.		
Accounting for cash	Record cash receipts and disbursements in a four column journal, when given the necessary information.		
	Write checks.		
	Record checks.		
	Reconcile the bank statement, when given the necessary information.		
	Develop an accounting system for a dental laboratory.		
	Operate an accounting system for a dental laboratory.		

SPECIFIC TECHNICAL

DLT 201 - Principles of Laboratory Management

Resources

Books

National Association of Dental Laboratories Management Procedures. (1982). Principles.

Videotapes

Stein, P. (1989). *Managing for profit.* NADL Publication.

SPECIFIC TECHNICAL

DLT 202 - Advanced Removable Partial Dentures I

Course Overview

Course Description

Focuses on skills in advanced concepts in removable partial dentures. Topics include: research in removable partial dentures, removable partial denture preparatory procedures, removable partial denture fabrication procedures, and advanced concepts in removable partial dentures.

Competency Areas

Research in Removable Partial Dentures
Removable Partial Denture Preparatory Procedures
Removable Partial Denture Fabrication Procedures
Advanced Concepts in Removable Partial Dentures

Prerequisites

DLT 111, DLT 115

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

SPECIFIC TECHNICAL

DLT 202 - Advanced Removable Partial Dentures I

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
RESEARCH IN REMOVABLE PARTIAL DENTURES		1	9
Report	Select a research topic on an area of removable partial dentures. Research a topic on an area of removable partial dentures. Type a 1500 word research report on an area of removable partial dentures.		
Oral presentation	Present the project orally with media and/or training aids.		
REMOVABLE PARTIAL DENTURE PREPARATORY PROCEDURES		4	0
Stress breaker	Discuss the purpose and fabrication of the stress breaker in removable partial dentures.		
Frictional wall	Discuss the purpose and fabrication of the frictional wall precision attachment for removable partial dentures.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
REMOVABLE PARTIAL DENTURE FABRICATION PROCEDURES		**0**	**81**
Removable framework	Construct a removable framework with precision attachment and stress breaker.		
ADVANCED CONCEPTS IN REMOVABLE PARTIAL DENTURES		**5**	**0**
Metal backings/ reverse pin facings	Discuss the use of the metal backings and reverse pin facings.		
Transitional removable partial dentures	Discuss the use of transitional removable partial dentures.		
Dual path of injection	Discuss the use of the dual path of injection removable partial denture.		
Milling machine	Discuss the use of the milling machine in preparing crowns for precision attachments.		
Swingback	Discuss the use of the swingback removable partial denture.		
Obturator	Discuss the use of the obturator in removable partial denture.		

SPECIFIC TECHNICAL

DLT 202 - Advanced Removable Partial Dentures I

Resources

Books

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Removable partial dentures* (Vol. 3). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 203 - Advanced Crown and Bridge I

Course Overview

Course Description

Focuses on skills in advanced concepts in crown and bridge. Topics include: research in crown and bridge, crown and bridge preparatory procedures, crown and bridge fabrication procedures, and advanced concepts in crown and bridge.

Competency Areas

Research in Crown and Bridge
Crown and Bridge Preparatory Procedures
Crown and Bridge Fabrication Procedures
Advanced Concepts in Crown and Bridge

Prerequisite

DLT 112

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

SPECIFIC TECHNICAL

DLT 203 - Advanced Crown and Bridge I

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
RESEARCH IN CROWN AND BRIDGE		1	9
Topic	Select a research topic on an area of crown and bridge.		
	Research a topic on an area of crown and bridge.		
	Type a 1500 word research report on an area of crown and bridge.		
Oral presentation	Present the project orally with media and/or training aids.		
CROWN AND BRIDGE PREPARATORY PROCEDURES		1	4
Casts	Develop multi-unit working cast with removable dies and exposed margins.		
CROWN AND BRIDGE FABRICATION PROCEDURES		7	71
Multi-unit full cast appliances	Explain components of a multi-unit crown and bridge appliance.		
Pontic designs	Describe various pontic designs.		
Waxing	Wax multi-unit anterior/posterior bridges.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Sprue bridges.		
	Invest bridges.		
	Burnout bridges.		
	Cast bridges.		
Finishing/polishing	Finish full cast metal bridges.		
	Polish full cast metal bridges.		
ADVANCED CONCEPTS IN CROWN AND BRIDGE		**1**	***6***
Bridge repair	Describe procedures for soldering full multi-unit bridges.		
Soldering	Demonstrate soldering procedures.		
Finishing/polishing	Finish soldered bridges.		
	Polish soldered bridges.		

SPECIFIC TECHNICAL

DLT 203 - Advanced Crown and Bridge I

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: Government University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 204 - Advanced Complete Dentures I

Course Overview

Course Description

Focuses on skills in advanced concepts in complete dentures. Topics include: research in complete dentures, complete denture preparatory procedures, complete denture fabrication procedures, and advanced concepts in complete dentures.

Competency Areas

Research in Complete Dentures
Complete Denture Preparatory Procedures
Complete Denture Fabrication Procedures
Advanced Concepts in Complete Dentures

Prerequisite

DLT 113

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

SPECIFIC TECHNICAL

DLT 204 - Advanced Complete Dentures I

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
RESEARCH IN COMPLETE DENTURES		1	9
Research report	Select a research topic on an area of complete dentures. Research a topic on an area of complete dentures. Type a 1500 word research report on an area of complete dentures.		
Oral presentation	Present the project orally with media and/or training aids.		
COMPLETE DENTURE PREPARATORY PROCEDURES		4	9
Bases/occlusal rims/ facebow	Discuss the use and fabrication of the transfer bases and occlusal rims and the facebow on the articulator.		
Posterior teeth	Discuss the purpose and selection of posterior teeth to blend with the patient's needs.		
Resins	Discuss the variations and uses of the fluid resin and VLC resin materials.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
COMPLETE DENTURE FABRICATION PROCEDURES		**2**	**70**
Facebow transfer	Mount a complete denture model using the facebow transfer.		
Teeth selection	Select teeth for complete dentures.		
Teeth arrangements	Arrange teeth on semiadjustable articulators.		
Denture processing	Process complete dentures in fluid resin and VLC acrylic.		
ADVANCED CONCEPTS IN COMPLETE DENTURES		**3**	**2**
Immediate denture and surgical tray fabrication	Discuss immediate denture and surgical tray fabrication.		
Injection process	Discuss the use of the injection process for complete dentures.		

SPECIFIC TECHNICAL

DLT 204 - Advanced Complete Dentures I

Resources

Books

Boucher, Hickey, Zarb, & Ted. (1975). *Prosthodontic treatment for edentulous patients*. St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 205 - Advanced Dental Ceramics I

Course Overview

Course Description

Focuses on skills in advanced concepts in dental ceramics. Topics include: research in dental ceramics, dental ceramics preparatory procedures, dental ceramics fabrication procedures, and advanced concepts in dental ceramics.

Competency Areas

Research in Dental Ceramics
Dental Ceramics Preparatory Procedures
Dental Ceramics Fabrication Procedures
Advanced Concepts in Dental Ceramics

Prerequisite

DLT 114

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

SPECIFIC TECHNICAL

DLT 205 - Advanced Dental Ceramics I

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
RESEARCH IN DENTAL CERAMICS		**1**	**9**
Topics	Select a research topic on an area in dental ceramics.		
	Research a topic on an area in dental ceramics.		
	Type a 1500 word research report on an area in dental ceramics.		
Oral presentation	Present the project orally with media and/or training aids.		
DENTAL CERAMICS PREPARATORY PROCEDURES		**1**	**4**
Casts	Develop a multi-unit working cast with removable dies and exposed margins.		
DENTAL CERAMICS FABRICATION PROCEDURES		**7**	**71**
Substructure design	Describe various multi-unit substructure designs.		
	Explain fabrication procedures of multi-unit anterior and posterior appliances.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Wax multi-unit ceramic substructure.		
	Sprue multi-unit ceramic substructure.		
	Invest multi-unit ceramic substructure.		
	Burnout multi-unit ceramic substructure.		
	Cast multi-unit ceramic substructure.		
	Finish multi-unit ceramic substructure.		
Ceramic application	Discuss procedures for applying porcelain on a multi-unit anterior and posterior substructure.		
	Demonstrate multi-unit anterior and posterior buildup procedures.		
	Fire multi-unit anterior and posterior ceramic appliances.		
	Grind multi-unit anterior and posterior ceramic appliances.		
	Contour multi-unit anterior and posterior ceramic appliances.		
	Stain multi-unit anterior and posterior ceramic appliances.		
	Glaze multi-unit anterior and posterior ceramic appliances.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
ADVANCED CONCEPTS IN DENTAL CERAMICS		**1**	**6**
Staining techniques	Discuss internal and external staining techniques.		
Packing and firing	Demonstrate various techniques in packing and firing a ceramic restoration.		
Repairs	Explain different techniques for repairing multi-unit ceramic appliances.		

SPECIFIC TECHNICAL

DLT 205 - Advanced Dental Ceramics I

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 206 - Advanced Removable Partial Dentures II

Course Overview

Course Description

Focuses on skills in advanced concepts in removable partial dentures. Topics include: removable partial denture preparatory procedures, removable partial denture fabrication procedures, and advanced concepts in removable partial dentures.

Competency Areas

Removable Partial Denture Preparatory Procedures
Removable Partial Denture Fabrication Procedures
Advanced Concepts in Removable Partial Dentures

Prerequisite

DLT 202

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

SPECIFIC TECHNICAL

DLT 206 - Advanced Removable Partial Dentures II

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
REMOVABLE PARTIAL DENTURE PREPARATORY PROCEDURES		**5**	**5**
Kennedy classification	Discuss the Kennedy classification of removable partial dentures and its purpose.		
Partials	Identify the various types of removable partial dentures.		
Selecting and ordering teeth	Discuss the procedures for selecting and ordering teeth for removable partial dentures.		
	Select teeth.		
	Order teeth.		
Fluid resin technique	Discuss the fluid resin technique for processing removable partial dentures.		
	Process a removable partial denture using the fluid resin technique.		
VLC technique	Discuss the VLC technique of processing acrylic.		
	Process a removable partial denture using the VLC technique.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
Final impression	Discuss the final impression technique of the edentulous tissue.		
Restoration of edentulous tissue	Restore the edentulous tissue on a removable partial denture model.		
REMOVABLE PARTIAL DENTURE FABRICATION PROCEDURES		**0**	**81**
Types of partials	Identify the various types of partials.		
	Determine the type of removable partial denture.		
Selecting and ordering teeth	Select teeth.		
	Order teeth.		
Processing	Process a removable partial denture using the fluid resin technique.		
	Process a removable partial denture using the VLC technique.		
Restoration of edentulous tissue	Restore the edentulous tissue on a removable partial denture model.		
ADVANCED CONCEPTS IN REMOVABLE PARTIAL DENTURES		**5**	**4**
Troubleshooting	Discuss troubleshooting in the removable partial denture laboratory.		

SPECIFIC TECHNICAL

DLT 206 - Advanced Removable Partial Dentures II

Resources

Books

Rhoads, J., Rudd, K., & Morrow, R. (1986). *Dental laboratory procedures: Removable partial dentures* (Vol. 3). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 207 - Advanced Crown and Bridge II

Course Overview

Course Description

Focuses on skills in advanced concepts in crown and bridge. Topics include: crown and bridge preparatory procedures, crown and bridge fabrication procedures, and advanced concepts in crown and bridge.

Competency Areas

Crown and Bridge Preparatory Procedures
Crown and Bridge Fabrication Procedures
Advanced Concepts in Crown and Bridge

Prerequisite

DLT 203

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

SPECIFIC TECHNICAL

DLT 207 - Advanced Crown and Bridge II

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
CROWN AND BRIDGE PREPARATORY PROCEDURES		**2**	**10**
Casts	Develop casts to receive single and multi-unit acrylic appliances, full cast crown under a partial, and broken stress attachment.		
CROWN AND BRIDGE FABRICATION PROCEDURES		**7**	**70**
Acrylic appliances	Explain types and uses of acrylic resin appliances. Wax acrylic frameworks for single and multi-unit acrylic resin appliances. Sprue acrylic frameworks for single and multi-unit acrylic resin appliances. Invest acrylic frameworks for single and multi-unit acrylic resin appliances. Burnout acrylic frameworks for single and multi-unit acrylic resin appliances.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Cast acrylic frameworks for single and multi-unit acrylic resin appliances.		
	Finish acrylic frameworks for single and multi-unit acrylic resin appliances.		
	Demonstrate application, curing, and finishing of the acrylic resin appliances.		
Crown under partial frameworks	Discuss types and uses of crowns under partial frameworks.		
	Wax crowns under partial frameworks.		
	Sprue crowns under partial frameworks.		
	Invest crowns under partial frameworks.		
	Burnout crowns under partial frameworks.		
	Cast crowns under partial frameworks.		
	Finish crowns under partial frameworks.		
Broken stress attachment	Explain different types of broken stress attachments.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Wax a multi-unit appliance with a broken stress attachment.		
	Sprue a multi-unit appliance with a broken stress attachment.		
	Invest a multi-unit appliance with a broken stress attachment.		
	Burnout a multi-unit appliance with a broken stress attachment.		
	Cast a multi-unit appliance with a broken stress attachment.		
	Finish a multi-unit appliance with a broken stress attachment.		
ADVANCED CONCEPTS IN CROWN AND BRIDGE		1	10
Materials	Discuss new materials in crown and bridge fabrication.		
Techniques	Demonstrate new techniques and appliances involved in crown and bridge.		

SPECIFIC TECHNICAL

DLT 207 - Advanced Crown and Bridge II

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 208 - Advanced Complete Dentures II

Course Overview

Course Description

Focuses on skills in advanced concepts in complete dentures. Topics include: complete denture preparatory procedures, complete denture fabrication procedures, and advanced concepts in complete dentures.

Competency Areas

Complete Denture Preparatory Procedures
Complete Denture Fabrication Procedures
Advanced Concepts in Complete Dentures

Prerequisite

DLT 204

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

Document Number:
04-15-02

SPECIFIC TECHNICAL

DLT 208 - Advanced Complete Dentures II

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
COMPLETE DENTURE PREPARATORY PROCEDURES		**5**	**5**
EPF techniques	Discuss the EPF techniques of anterior tooth selection.		
Class III bite	Discuss the setting of the class III bite.		
Immediate dentures	Discuss the purpose of the immediate denture.		
Single complete denture	Discuss the purpose of the single complete denture against natural teeth.		
Rebasing	Discuss the techniques of rebasing the complete denture.		
COMPLETE DENTURE FABRICATION PROCEDURES		**1**	**85**
Setting/processing complete denture	Set a complete denture in a class III bite.		
	Process a complete denture in a class III bite.		
Setting teeth	Set teeth against natural teeth.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Fabricate single denture against natural teeth.		
Relining	Reline the complete denture.		
Rebasing	Rebase the complete denture.		
ADVANCED CONCEPTS IN COMPLETE DENTURES		**4**	**0**
Tooth supported complete denture	Discuss the tooth supported complete denture.		
Implant stabilized complete denture	Discuss the implant stabilized complete denture.		

SPECIFIC TECHNICAL

DLT 208 - Advanced Complete Dentures II

Resources

Books

Morrow, R. (Ed.). (1985). *Dental laboratory procedures: Complete dentures* (Vol. 1). (2nd ed.). St. Louis: Mosby.

Sowter, J. (1986). *Dental laboratory technology, removable prosthodontics.* Chapel Hill, NC: University of North Carolina.

SPECIFIC TECHNICAL

DLT 209 - Advanced Dental Ceramics II

Course Overview

Course Description

Focuses on skills in advanced concepts in dental ceramics. Topics include: dental ceramics preparatory procedures, dental ceramics fabrication procedures, and advanced concepts in dental ceramics.

Competency Areas

Dental Ceramics Preparatory Procedures
Dental Ceramics Fabrication Procedures
Advanced Concepts in Dental Ceramics

Prerequisite

DLT 205

Credit Hours

5

Contact Hours Per Week

Class - 1

D.Lab - 9

SPECIFIC TECHNICAL

DLT 209 - Advanced Dental Ceramics II

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
DENTAL CERAMICS PREPARATORY PROCEDURES		**2**	**10**
Casts	Demonstrate procedures for developing a cast for a porcelain jacket crown. Describe procedures for developing a cast for a porcelain crown under a partial framework. Explain procedures for developing a cast to receive a ceramic appliance with a precision attachment. Develop a cast with a post and core ceramic appliance.		
DENTAL CERAMICS FABRICATION PROCEDURES		**6**	**80**
Porcelain jacket crown	Explain uses of a porcelain jacket crown. Demonstrate development of a porcelain jacket crown.		
Porcelain crown under a partial	Discuss uses of a porcelain crown under a partial framework.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours Lab
	Demonstrate development of a porcelain crown under a partial framework.		
Ceramic appliance with precision attachment	Show different types of precision attachments.		
	Demonstrate use of precision attachments and ceramic appliances.		
Post and core ceramic appliances	Explain different techniques for developing a post and core ceramic crown.		
	Demonstrate procedures for developing a post and core ceramic crown.		
ADVANCED CONCEPTS IN DENTAL CERAMICS		**2**	**0**
Materials	Discuss new ceramic materials recently developed.		
Techniques	Explain new techniques for developing ceramic restorations.		

SPECIFIC TECHNICAL

DLT 209 - Advanced Dental Ceramics II

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

SPECIFIC TECHNICAL

DLT 214 - Removable Partial Dentures Practicum

Course Overview

Course Description

Focuses on the application and reinforcement of advanced concepts and principles in removable partial denture fabrication in an actual job setting or practicum experience. Students are acquainted with occupational responsibilities through realistic work situations on the job. Topics include, but are not limited to: problem solving, adaptability to the job setting, use of proper interpersonal skills, interpretation of work authorizations, fabrication of removable partial denture prostheses, and professional development. The occupation-based instruction is implemented through the use of written individualized training plans, written performance evaluation, a required weekly seminar, and required practicum or on-the-job training.

Competency Areas

Problem Solving
Adaptability to the Job Setting
Use of Proper Interpersonal Skills
Interpretation of Work Authorizations
Fabrication of Removable Partial Denture Prostheses
Professional Development

Prerequisites

DLT 202, DLT 206

Credit Hours

6

Contact Hours Per Week

Class - 0

O.B.I. - 18

SPECIFIC TECHNICAL

DLT 214 - Removable Partial Dentures Practicum

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
PROBLEM SOLVING		**0**	**5**
Problem solving on the job	Use problem solving techniques in the job setting.		
ADAPTABILITY TO THE JOB SETTING		**0**	**2**
Directions	Follow directions as given by supervisory staff.		
USE OF PROPER INTERPERSONAL SKILLS		**0**	**3**
Interaction with others	Interact effectively with others in the job setting.		
Listening	Demonstrate ability to listen to others.		
INTERPRETATION OF WORK AUTHORIZATIONS		**0**	**10**
Work authorizations	Interpret work authorizations to produce acceptable dental prostheses.		
FABRICATION OF REMOVABLE PARTIAL DENTURE PROSTHESES		**0**	**155**
Removable partial dentures	Survey master casts.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
	Blockout master casts.		
Waxing	Wax removable partial denture framework.		
	Invest removable partial denture framework.		
Finishing	Burnout removable partial denture frameworks.		
	Cast removable partial denture frameworks.		
	Finish removable partial denture frameworks.		
	Polish removable partial denture frameworks.		
Arrangement of teeth	Arrange artificial teeth on removable partial denture frameworks.		
Repairs	Repair removable partial denture frameworks.		
PROFESSIONAL DEVELOPMENT		**0**	**5**
Professionalism	Conduct him/herself in a professional manner.		

SPECIFIC TECHNICAL

DLT 214 - Removable Partial Dentures Practicum

Resources

Books

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Removable partial dentures* (Vol. 3). (2nd ed.). St. Louis: Mosby.

3 Party Contract

SPECIFIC TECHNICAL

DLT 215 - Crown and Bridge Practicum

Course Overview

Course Description

Focuses on the application and reinforcement of advanced concepts and principles in crown and bridge fabrication in an actual job setting or practicum experience. Students are acquainted with occupational responsibilities through realistic work situations on the job. Topics include, but are not limited to: problem solving, adaptability to the job setting, use of proper interpersonal skills, interpretation of work authorizations, fabrication of crown and bridge prostheses, and professional development. The occupation-based instruction is implemented through the use of written individualized training plans, written performance evaluation, a required weekly seminar, and required practicum or on-the-job training.

Competency Areas

Problem Solving
Adaptability to the Job Setting
Use of Proper Interpersonal Skills
Interpretation of Work Authorizations
Fabrication of Crown and Bridge Prostheses
Professional Development

Prerequisites

DLT 203, DLT 207

Credit Hours

6

Contact Hours Per Week

Class - 0

O.B.I. - 18

SPECIFIC TECHNICAL

DLT 215 - Crown and Bridge Practicum

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
PROBLEM SOLVING		**0**	**5**
Problem solving on the job	Use problem solving techniques in the job setting.		
ADAPTABILITY TO THE JOB SETTING		**0**	**2**
Directions	Follow directions as given by supervisory staff.		
USE OF PROPER INTERPERSONAL SKILLS		**0**	**3**
Interaction with others	Interact effectively with others in the job setting.		
Listening	Demonstrate ability to listen to others.		
INTERPRETATION OF WORK AUTHORIZATIONS		**0**	**10**
Work authorizations	Interpret work authorizations to produce acceptable dental prostheses.		
FABRICATION OF CROWN AND BRIDGE PROSTHESES		**0**	**155**
Crown and bridge	Wax crowns and pontics.		

Recommended Outline	After completing this section, the student will:	Hours Class	OBI
	Invest crowns and pontics.		
	Cast crowns and pontics.		
	Finish crowns and pontics.		
	Polish crowns and pontics.		
	Solder bridges.		
PROFESSIONAL DEVELOPMENT		**0**	**5**
Professionalism	Conduct him/herself in a professional manner.		

SPECIFIC TECHNICAL

DLT 215 - Crown and Bridge Practicum

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

3 Party Contract

SPECIFIC TECHNICAL

DLT 216 - Complete Dentures Practicum

Course Overview

Course Description

Focuses on the application and reinforcement of advanced concepts and principles in complete dentures fabrication in an actual job setting or practicum experience. Students are acquainted with occupational responsibilities through realistic work situations on the job. Topics include, but are not limited to: problem solving, adaptability to the job setting, use of proper interpersonal skills, interpretation of work authorizations, fabrication of complete denture prostheses, and professional development. The occupation-based instruction is implemented through the use of written individualized training plans, written performance evaluation, a required weekly seminar, and required practicum or on-the-job training.

Competency Areas

Problem Solving
Adaptability to the Job Setting
Use of Proper Interpersonal Skills
Interpretation of Work Authorizations
Fabrication of Complete Denture Prostheses
Professional Development

Prerequisites

DLT 204, DLT 208

Credit Hours

6

Contact Hours Per Week

Class - 0

O.B.I. - 18

SPECIFIC TECHNICAL

DLT 216 - Complete Dentures Practicum

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
PROBLEM SOLVING		**0**	**5**
Problem solving on the job	Use problem solving techniques in the job setting.		
ADAPTABILITY TO THE JOB SETTING		**0**	**2**
Directions	Follow directions as given by supervisory staff.		
USE OF PROPER INTERPERSONAL SKILLS		**0**	**3**
Interaction with others	Interact effectively with others in the job setting.		
Listening	Demonstrate ability to listen to others.		
INTERPRETATION OF WORK AUTHORIZATIONS		**0**	**10**
Work authorizations	Interpret work authorizations to produce acceptable dental prostheses.		
FABRICATION OF COMPLETE DENTURE PROSTHESES		**0**	**155**
Complete dentures	Arrange artificial teeth for complete and immediate dentures.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
Waxing	Wax denture bases.		
Processing	Flask complete and partial dentures.		
	Boilout complete and partial dentures.		
	Pack complete and partial dentures.		
	Process complete and partial dentures.		
Finishing	Deflask complete and partial dentures.		
	Finish complete and partial dentures.		
	Polish complete and partial dentures.		
Repairing	Repair complete dentures.		
PROFESSIONAL DEVELOPMENT		**0**	**5**
Professionalism	Conduct him/herself in a professional manner.		

SPECIFIC TECHNICAL

DLT 216 - Complete Dentures Practicum

Resources

Books

Boucher, Hickey, Zarb, & Ted. (1975). *Prosthodontic treatment for edentulous patients*. St. Louis: Mosby.

Morrow, R. (Ed.). (1985). *Dental laboratory procedures: Complete dentures* (Vol. 1). (2nd ed.). St. Louis: Mosby.

Sowter, J. (1986). *Dental laboratory technology: Removable prosthodontics*. Chapel Hill, NC: University of North Carolina.

3 Party Contract

SPECIFIC TECHNICAL

DLT 217 - Dental Ceramics Practicum

Course Overview

Course Description

Focuses on the application and reinforcement of advanced concepts and principles in dental ceramics fabrication in an actual job setting or practicum experience. Students are acquainted with occupational responsibilities through realistic work situations on the job. Topics include, but are not limited to: problem solving, adaptability to the job setting, use of proper interpersonal skills, interpretation of work authorizations, fabrication of dental ceramics prostheses, and professional development. The occupation-based instruction is implemented through the use of written individualized training plans, written performance evaluation, a required weekly seminar, and required practicum or on-the-job training.

Competency Areas

Problem Solving
Adaptability to the Job Setting
Use of Proper Interpersonal Skills
Interpretation of Work Authorizations
Fabrication of Dental Ceramics Prostheses
Professional Development

Prerequisites

DLT 205, DLT 209

Credit Hours

6

Contact Hours Per Week

Class - 0

O.B.I. - 18

SPECIFIC TECHNICAL

DLT 217 - Dental Ceramics Practicum

Course Outline

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
PROBLEM SOLVING		**0**	**5**
Problem solving on the job	Use problem solving techniques in the job setting.		
ADAPTABILITY TO THE JOB SETTING		**0**	**2**
Directions	Follow directions as given by supervisory staff.		
USE OF PROPER INTERPERSONAL SKILLS		**0**	**3**
Interaction with others	Interact effectively with others in the job setting.		
Listening	Demonstrate ability to listen to others.		
INTERPRETATION OF WORK AUTHORIZATIONS		**0**	**10**
Work authorizations	Interpret work authorizations to produce acceptable dental prostheses.		
FABRICATION OF DENTAL CERAMICS PROSTHESES		**0**	**155**
Waxing	Wax ceramic substructures.		

Recommended Outline	After completing this section, the student will:	Hours Class	Hours OBI
Investing and casting	Invest ceramic substructures.		
	Cast ceramic substructures.		
Finishing	Finish ceramic substructures.		
Opaque	Apply opaque to substructures.		
Contouring	Apply porcelain to substructures.		
	Contour porcelain to substructures.		
PROFESSIONAL DEVELOPMENT		**0**	**5**
Professionalism	Conduct him/herself in a professional manner.		

SPECIFIC TECHNICAL

DLT 217 - Dental Ceramics Practicum

Resources

Books

Johnston, J. F., Phillips, R. W., & Dykema, R. W. (1971). *Modern practice in crown and bridge prosthodontics.* Philadelphia: W. B. Saunders.

Leinfelder, K., & Taylor, D. (1982). *Laboratory and clinical dental materials.* Chapel Hill, NC: University of North Carolina.

Mazuiewicz, L. (1982). *Dental laboratory technology-Air Force manual.* Washington, DC: U.S. Government Printing Office.

Murray, & Sluder. (1972). *Dental laboratory technology: Fixed restorative techniques.* Chapel Hill, NC: University of North Carolina.

Rhoads, J., Rudd, K., & Morrow, R. (1985). *Dental laboratory procedures: Fixed partial dentures* (Vol. 2). (2nd ed.). St. Louis: Mosby.

3 Party Contract

APPENDIX A

APPENDIX A

Dental Laboratory Technology

Equipment List

Adding machine
Air compressors
Air scribe
Aluminum shell
Amalgam dispenser
Amalgam instrument
Amalgamator (mechanical)
Anesthetic (gas) equipment
Articulator
Articulator, anatomic
Articulator, arcon
Aspirators
Assistant's stool
Auto-duplicator
Bath, hydroscopic
Blood pressure cuff
Burner, Bunsen
Burr basket
Camera
Camron-mitter electrosurg
Casting machine, HIFREQ
Cavitron
Centrifugal casting machine
Cephalograph
Cleaner, ultrasonic
Conventional dental units
Copper bands
Cotton roll holder
Culture tubes & plates
Dental lathe
Dentrometer
Drill, dowel pin ACCUD
Electric burn-out furnace
Electric welding machine
Electronically operated mallets
Extinguisher, fire
Flowmeter
Furnace, B.O., ACCO-TEMPMASTER
Furnace, B.O., ACCO-THERM
Furnace, PORC, 660
Furnace, PORC, STARFIRE
Gas burner
Glass slab
Gold foil equipment
Grinder, alloy HS
Grinder, model
Hand cutting instruments
Handpiece, air
Handpiece, electrical, variable speed
Handpiece, HS, PORC fin
Hemolet
Hemostats
High speed dental units
Hydrocolloid conditioners
Hygrobath
Impression trays
Insta-steam
Lathe, bench, QC
Lathe, pumice, DS
Machine, casting, B.A.
Matrix retainers
Mechanical instrument sharpener
Mechanical mixer
Microscopes
Miniglaze
Mobile cabinet

Mobile oral evacuating machine
Model trimmers
Modular cabinets
Mortar and pestle
Motor dental chair noncutting instruments
Operating light
Operating unit
Operator's stool
Oral evacuating machine
Oral surgery mallet and points
Oven, model drying
Oxygen equipment
Panorex
Perio probe
Pneumatic condenser
Polisher, electric, RPD
Polishing instruments
Portable dental units
Pulp tester
Reamers and file
Resuscitation equipment
Retractors
Rotary cutting instruments
Rubber dam equipment
Sandblaster, jelblast
Sandblaster, upright
Scales
Slides
Spatulas
Spatulator, vacuum, PLA
Sterilizers
Suction apparatus
Surgical instruments
Surveyor, RPD
Syringe warmer
Syringes
Tape recorders
Telephone
Thermofax machine
Tonator for fluoride
Trimmer, model, ortho
Typewriters
Ultrasonic portable unit
Vac-u-vestor, power mix
Vacuum dustmate
Vacuum, former
Vacuum pump
Vacuum, shop
Vibrator
Vibrator, inv, RPD
View box
Wax templates
Welder, electric, RPD
Wire framing tools
X-ray machine
X-ray processing equipment

The Georgia Board of Technical and Adult Education does not discriminate on the basis of age, sex, race, color, religion, national origin, or handicap in its educational programs, activities, or employment policies.